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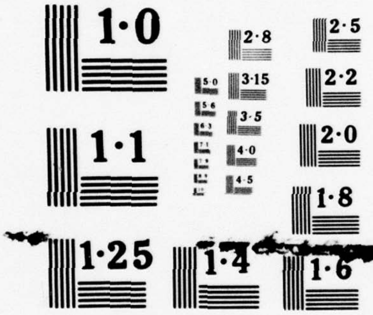

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ESD-TR-78-127, Vol. II

USER REQUIREMENTS LANGUAGE (URL) USER'S MANUAL PART II (REFERENCE) H6180/MULTICS/VERSION 3.2

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This report is part of a series that deals with a Computer-Aided Design and Specification Analysis Tool (CADSAT). The purpose of the tool is to describe the requirements for information processing systems and to record such descriptions in machine-processable form. The major components of CADSAT are the User Requirements Language (URL) and the User Requirements Analyzer (URA) which can operate in an interactive computer environment. This report, Part I and Part II, describes how the formal URL may be used to define systems. It explains the language statements available, their use and application on a Honeywell 6180 Multics Computer. (cont on p 6)

(In parts I and II, this report)

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PREFACE

(cont fr p14)

This manual describes the User Requirements Lanugage (URL) to be used with Version 3.2 of the User Requirements Analyzer (URA). The manual consists of two volumes which are referred to as Part I and Part II in the documentation. Part I gives a detailed description of the URL statements available and their use. Part II is a reference manual which gives the proper syntax for each statement.

URL Language Reference Manual

CONTENTS

APPENDICES:

1.0 Introduction and Purpose

The original Problem Statement Language (PSL 1.0) was designed to provide the User with an improved method of stating requirements for a target information processing system (TIPS). This goal was achieved by developmental work in the ISDOS Research Project leading to PSL 2.0 and URL 3.0 and their associated Analyzers (PSA 2.0 and URA 3.0). However, as with any developmental project, continued work yields improved understanding and eventually an improved product. Such is the case for URL 3.2 and the URA 3.2.

The new URL 3.2, hereafter referred to as URL, provides the User greater flexibility, more features and greater ease of use, while still maintaining the overall goals of such a computer-aided method. Therefore, URL is designed to provide understandable communication and documentation for both men and machine by having a simple syntax for the machine while maintaining the readability for the man.

The purpose of this manual is to provide a concise description of URL syntax and give brief examples of usage.

2.0 THE LANGUAGE

2.1 Introduction

Any language which is to be processed by computer needs to be structured in some way. The User Requirements Language, although it is based on English in that it uses English words and is intended to be readable as English text, must therefore be more precise than a natural language. Just as in English, the basic unit of the language is a word. In order for the Analyzer to understand URL, it treats all words as one of two types: Reserved Words, and names. Reserved Words have a specific meaning to the Analyzer and must be spelled exactly as given in the Reserved Word List (Appendix B). Many Reserved Words have a short form which may be substituted for the Reserved Word; these short forms are also given in the Reserved Word List. Some Reserved Words are essential for the URA to interpret the meaning of a statement. Other Reserved Words are not used by the Analyzer. These Reserved Words are called Optional Words (see Appendix C). Names are assigned by the User to facilitate the description of the target system. Names must be formed according to the rules given in sections 2.3 and 2.5.

These Reserved Words and names are combined with appropriate punctuation to form statements. Punctuation must be given exactly as shown in the syntax for a statement. For example, name(s) correspond to several names separated by commas; the commas are required in name(s) between each pair of names. A special punctuation symbol, a semi-colon, is used to end a statement in URL. Just as some Reserved Words are optional and do not affect the interpretation of a statement by the Analyzer, the colon is a special punctuation which may be used without affecting the meaning of a statement.

To illustrate, the syntax for the KEYWORD statement is:

<u>KEYWORDS</u> ARE keyword-name(s) ;

The following statements all provide equivalent information to the analyzer:

1) KEYWORD KEY1, KEY2, KEY3;
2) THE KEYWORDS ARE: KEY1, KEY2, AND KEY3;

- KEYWORD is a required Reserved Word.
- THE, ARE and AND are Optional Reserved Words.
- KEY1, KEY2, KEY3 are names.
- The commas and semi-colon are required punctuation.
- The colon is optional punctuation.

2.2 URL character set

See PART I, Section 1.6.7.

2.3 Words

A word in URL is not more than 30 contiguous code 2 or 3 characters. (See PART I, Section 1.6.7.)

2.4 Integer

An integer in URL is composed of a series of digits without decimal point, plus or minus sign.

2.5 Names

All names in URL have a type associated with them (see Appendix B for possible types). In the format for the statements, only certain types of names are allowed in certain contexts. This is indicated in the associated usage rules.

Note: Names must begin with a letter.
Note: A name in URL is any combination of not more than thirty of the above characters.
Note: Blanks may not be used in names.

2.6 Punctuation

The following characters are used for punctuation in URL:

	space (blank)
,	comma
;	semi colon
:	colon

The following rules apply to the use of punctuation in URL:
-When any punctuation appears in the format for a statement, the punctuation must be given exactly as shown.
-Two or more blanks are treated the same as a single blank.
-Blanks may be used anywhere except in words or integers.
-A colon may be used anywhere that a blank is allowed.
-A semi-colon may only be used to end a statement.

2.7 Name(s)

Name(s) is a series of names separated by commas.

2.8 Statement formation

Statements are formed from words and punctuation according to the rules given in chapter 3 and 4.

General rules:

-All statements must end in a semi-colon.

-Words must be separated by at least one character (punctuation, blank etc.).

-Any punctuation in the format descriptions of chapter 3 or 4 must be given exactly as shown.

-All statements, except section header statements, may be preceeded by optional name(s). The names must be used in the header statement for the section in which the statement occurs. If the name(s) are not given then the statement applies to all the names in the header statement. Alternately, if the name(s) are given, the statement will apply only to names in the list.

2.9 Sections

A problem statement in URL consists of at least one section. The possible section types are given in Appendix F. A section is a series of statements the first of which is a header statement; the type of header statement determines the type of section. The other statements in a section may be given in any order.

General rules:

-Only certain types of statements are allowed in a section, depending on the section type. The specific statements allowed in any section are given in chapter 3.

2.10 Comment-entry

Several statements have a comment-entry associated with them. Comment-entries are handled by the analyzer as follows:

-The rest of the input line containing the semi-colon after the reserved word for the statement is discarded

-Lines are read and added to the data base as given, up to and including the first line which contains a semi-colon.

-The semi-colon is replaced with a blank in this line before the line is added to the data base. (Note: then complete line is added to the data base even if the semi-colon is the first character in that line.)

-Parsing of statements begins at the first character of the following line.

2.11 Comments

For increased comprehension and documentation, comments (to be differentiated from comment-entries) can be used. Every comment must begin with /* and end with characters reversed, i.e., */. No blanks or other characters may appear between these characters, they must be immediately adjacent. Comments are treated exactly as a blank and do not otherwise affect the analysis of the User Requirements. Although they appear in the URA As-Is-Source Listing, they are discarded by the analyzer and are not entered into the data base.

2.12 Notation Used in Describing Syntax

In this manual, the following notation is used when describing URL 3.2 syntax.

Lower Case Words

Words written in lower case call for names to be made up and inserted by the User. The lower case descriptions of user defined names tell what kind of words the User is to make up.

Braces

When words of phrases are enclosed in braces ({ }), a choice among the two or more entries must be made. It is important to note that one of the options must be chosen. Several braces vertically on a page is equivalent to one large brace.

Brackets

Whenever notation in a model appears within brackets ([ ]), it indicates some feature the User may optionally use. Several brackets vertically on a page is equivalent to one large bracket.

Ellipsis

The ellipsis (...) signifies that the URL construct immediately preceeding the ellipsis can be repeated as many times as desired by the User.

Underscoring

All upper case words which are underscored are URL Reserved Words and, if used, must appear exactly as shown.

System-Parameter

The use of system-parameter in the statement syntax denotes that the system-parameter name or integer can be used.

3.0 SECTION SUMMARIES

3.1 Statements Allowed in Most sections

The following statements are allowed in almost every section:

```
ASSERT name attribute-name attribute-value

                  [, name attribute-name attribute-value] ...;


                               { attv-name } [            { attv-name }  ]
ATTRIBUTES ARE attr-name       {           } [ ,attr-name {           }  ]...
                               {  integer  } [            {  integer  }  ]


DESCRIPTION :
      comment-entry ;

KEYWORDS ARE keyword-name(s) ;

RESPONSIBLE-PROBLEM-DEFINER IS problem-definer-name ;

SECURITY IS security-name(s) ;

SEE-MEMO memo-name(s) ;

SOURCE IS source-name(s) ;

SYNONYMS ARE synonym-name(s) ;

TRACE-KEY trace-key-name(s) ;
```

With the following exceptions:

- The RESPONSIBLE-PROBLEM-DEFINER statement is not allowed in a PROBLEM-DEFINER section.

- The SEE-MEMO statement is not allowed in the MEMO section.

- The KEYWORDS statement is not allowed in a DEFINE section for a KEYWORD.

- The SOURCE statement is not allowed in a DEFINE section for a SOURCE.

-The SECURITY statement is not allowed in a DEFINE section for a SECURITY.

-The TRACE-KEY statement is not allowed in a DEFINE section for a TRACE-KEY.

-No statements are allowed in a DESIGNATE section.

3.2 CONDITION section

```
CONDITION name(s) ;


ASSERT name attribute-name attribute-value

                    [, name attribute-name attribute-value] ...;


                                  { attv-name } [                { attv-name } ]
ATTRIBUTES ARE attr-name {            } [ ,attr-name {           } ]...
                                  {  integer  } [                {  integer  } ]


             { TRUE  }
BECOMING {       } CAUSES event-name(s);
             { FALSE }


             { TRUE  }
BECOMING {       } INTERRUPTS process-name(s) ;
             { FALSE }


             { TRUE  }
BECOMING {       } TERMINATES process-name(s) ;
             { FALSE }


             { TRUE  }
BECOMING {       } TRIGGERS process-name(s);
             { FALSE }


DESCRIPTION :
        comment-entry ;


KEYWORDS ARE keyword-name(s) ;


        { TRUE  }          event-
MADE {       } BY       input-name(s) ;
        { FALSE }        process-


RESPONSIBLE-PROBLEM-DEFINER IS problem-definer-name ;


SECURITY IS security-name(s) ;
```

3.2 CONDITION section (continued)

```
SEE-MEMO memo-name(s) ;

SOURCE IS source-name(s) ;

SYNONYMS ARE synonym-name(s) ;

TRACE-KEY trace-key-name(s) ;

{ TRUE  }
{       } WHILE ;
{ FALSE }
      comment-entry ;
```

3.3 DEFINE section

```
                 {ATTRIBUTE              }[         {ATTRIBUTE              } ]
                 {ATTRIBUTE-VALUE        }[         {ATTRIBUTE-VALUE        } ]
                 {CLASSIFICATION         }[         {CLASSIFICATION         } ]
                 {KEYWORD                }[         {KEYWORD                } ]
                 {MAILBOX                }[         {MAILBOX                } ]
DEFINE name      {SECURITY               }[, name   {SECURITY               } ] ...  ;
                 {SOURCE                 }[         {SOURCE                 } ]
                 {SUBSETTING-CRITERION   }[         {SUBSETTING-CRITERION   } ]
                 {SYSTEM-PARAMETER       }[         {SYSTEM-PARAMETER       } ]
                 {TRACE-KEY              }[         {TRACE-KEY              } ]


     APPLIES TO name(s) ;


     ASSERT name attribute-name attribute-value
                    [, name attribute-name attribute-value] ...;


                               { attv-name } [             { attv-name } ]
     ATTRIBUTES ARE attr-name  {           } [ ,attr-name  {           } ] ...
                               {  integer  } [             {  integer  } ]


     DESCRIPTION ;
             comment-entry ;


     KEYWORDS ARE keyword-name(s) ;


     MAINTAINED BY process-name(s) ;


     RESPONSIBLE-PROBLEM-DEFINER IS problem-definer-name ;


     SECURITY IS security-name(s) ;


     SEE-MEMO memo-name(s) ;


     SOURCE IS source-name(s) ;


     SUBSETTING-CRITERION FOR set-name(s) ;
```

3.3 DEFINE section (continued)

```
SYNONYMS ARE synonym-name(s) ;

TRACE-KEY trace-key-name(s) ;



                 {                 integer                 }
                 {                                         }
    VALUES ARE   { { *min    }               {  *max   } } ;
                 { {         }     THRU      {         } }
                 { { NEGINF  }               { POSINF  } }
```

* Min and max must be non-negative integers.

3.4 DESIGNATE section

```
    DESIGNATE name AS A SYNONYM FOR name
          [ , name AS A SYNONYM FOR name ] ...  ;
```

3.5 ELEMENT section

```
ELEMENT names(s) ;


ASSERT name attribute-name attribute-value
                  [, name attribute-name attribute-value] ...;


ASSOCIATED WITH relation-name(s) ;


                                  { attv-name } [                 { attv-name } ]
ATTRIBUTES ARE attr-name          {           } [  ,attr-name     {           } ] ...
                                  {  integer  } [                 {  integer  } ]


CLASSIFICATION classification-name [ integer ]
                  [, classification-name [ integer ]]...  ;

                  group-
                  entity-
CONTAINED IN       input-name(s)  ;
                  output-


                                  [            group-       ]
                                  [            entity-      ]
DERIVED BY   process-name(s)      [ USING        set-name(s)  ] ;
                                  [            input-       ]
                                  [           element-      ]


DESCRIPTION :
       comment-entry ;


IDENTIFIES entity-name(s)  ;


KEYWORDS ARE keyword-name(s) ;
```

3.5 ELEMENT section (continued)

```
RESPONSIBLE-PROBLEM-DEFINER IS problem-definer-name ;

SECURITY IS security-name(s) ;

SEE-MEMO memo-name(s) ;

SOURCE IS source-name(s) ;

SUBSETTING-CRITERION FOR set-name(s) ;

SYNONYMS ARE synonym-name(s) ;

TRACE-KEY trace-key-name(s) ;
                                      [         group-            ]
                                      [         entity-           ]
UPDATED BY  process-name(s) [ USING  element-    name(s) ] ;
                                      [         input-            ]
                                      [           set-            ]

                               [                    set-              ]
                               [      { DERIVE } *output-             ]
USED BY process-name(s) [  TO  {        } entity-    name(s) ] ;
                               [      { UPDATE }  group-              ]
                               [                  element-            ]
* Output-name(s) may only be used with the DERIVE clause.

                 {              integer               }
                 {                                    }
VALUES ARE { { *min    }              { *max  } } ;
                 { {         }    THRU    {          } }
                 { { NEGINF }              { POSINF } }
* Min and max must be integers.
```

3.6 ENTITY section

```
ENTITY name(s) ;


ASSERT name attribute-name attribute-value

                   [, name attribute-name attribute-value] ...;


                          { attv-name } [              { attv-name } ]
ATTRIBUTES ARE attr-name  {           } [ ,attr-name   {           } ] ...
                          {  integer  } [              {  integer  } ]


CARDINALITY IS system-parameter ;


CLASSIFICATION classification-name [ integer ]

                  [, classification-name [ integer ]]...  ;

                                          element-
CONSISTS OF [ system-parameter ]   group-name

                                             element-
                 [ , [ system-parameter ]   group-name ] ...  ;


CONTAINED IN set-name(s) ;


                                   [           group-          ]
                                   [          entity-          ]
DERIVED BY  process-name(s)  [ USING        set-name(s)     ] ;
                                   [           input-          ]
                                   [          element-         ]


DESCRIPTION ;
        comment-entry ;


                  group
IDENTIFIED BY element-name(s) ;


KEYWORDS ARE keyword-name(s) ;
```

3.6 ENTITY section (continued)

```
RELATED TO entity-name VIA relation-name ;

RESPONSIBLE-PROBLEM-DEFINER IS problem-definer-name ;

SECURITY IS security-name(s) ;

SEE-MEMO memo-name(s) ;

SOURCE IS source-name(s) ;

SYNONYMS ARE synonym-name(s) ;

TRACE-KEY trace-key-name(s) ;

                             [          group-             ]
                             [          entity-            ]
UPDATED BY  process-name(s)  [  USING   element-   name(s) ] ;
                             [          input-             ]
                             [          set-               ]

                           [                  set-              ]
                           [     { DERIVE }  *output-           ]
USED BY process-name(s)  [  TO {        }   entity-    name(s) ] ;
                           [     { UPDATE }   group-             ]
                           [                  element-          ]

* Output-name(s) may only be used with the DERIVE clause.

VOLATILITY ;
        comment-entry ;
```

3.7 EVENT section

```
EVENT name(s) ;

ASSERT name attribute-name attribute-value

                    [, name attribute-name attribute-value] ...;

                         { attv-name } [              { attv-name } ]
ATTRIBUTES ARE attr-name {           } [ ,attr-name   {           } ] ...
                         { integer   } [              { integer   } ]


               event-
CAUSED BY              name(s) ;
               input-


                                             { TRUE  }
CAUSED WHEN condition-name BECOMES           {       };
                                             { FALSE }

CAUSES event-name(s) ;

DESCRIPTION ;
       comment-entry ;

HAPPENS system-parameter TIMES-PER interval-name ;

ON INCEPTION OF process-name(s) ;

INTERRUPTS process-name(s);

KEYWORDS ARE keyword-name(s) ;

                             { TRUE  }
MAKES condition-name(s)      {       } ;
                             { FALSE }
```

3.7 EVENT section (continued)

RESPONSIBLE-PROBLEM-DEFINER IS problem-definer-name ;

SECURITY IS security-name(s) ;

SEE-MEMO memo-name(s) ;

SOURCE IS source-name(s) ;

SYNONYMS ARE synonym-name(s) ;

TERMINATES process-name(s);

ON TERMINATION OF process-name(s) ;

TRACE-KEY trace-key-name(s) ;

TRIGGERS process-name(s) ;

3.9 GROUP section

```
GROUP name(s) ;

ASSERT name attribute-name attribute-value
               [, name attribute-name attribute-value] ...;

ASSOCIATED WITH relation-name(s) ;

                             { attv-name } [                { attv-name } ]
ATTRIBUTES ARE attr-name     {           } [ ,attr-name     {           } ] ...
                             {  integer  } [                {  integer  } ]

CLASSIFICATION classification-name [ integer ]
               [, classification-name [ integer ]]...  ;

                                        element-
CONSISTS OF [ system-parameter ]   group-name

                                                   element-
              [ , [ system-parameter ]   group-name ] ...  ;

              group-
              entity-
CONTAINED IN        -name(s) ;
              input-
              output-

                                  [           group-             ]
                                  [          entity-             ]
DERIVED BY  process-name(s)  [ USING        set-name(s)     ] ;
                                  [           input-             ]
                                  [          element-            ]

DESCRIPTION ;
       comment-entry ;

IDENTIFIES entity-name(s) ;
```

3.8 GROUP section (continued)

```
KEYWORDS ARE keyword-name(s) ;

RESPONSIBLE-PROBLEM-DEFINER IS problem-definer-name ;

SECURITY IS security-name(s) ;

SEE-MEMO memo-name(s) ;

SOURCE IS source-name(s) ;

SUBSETTING-CRITERION FOR set-name(s) ;

SYNONYMS ARE synonym-name(s) ;

TRACE-KEY trace-key-name(s) ;

                                 [         group-            ]
                                 [         entity-           ]
UPDATED BY  process-name(s)      [ USING   element-  name(s) ] ;
                                 [         input-            ]
                                 [         set-              ]


                              [                 set-               ]
                              [     { DERIVE } *output-            ]
USED BY process-name(s)       [ TO  {        }  entity-    name(s) ] ;
                              [     { UPDATE }  group-             ]
                              [                 element-           ]
```

* Output-name(s) may only be used with the DERIVE clause.

3.9 INPUT section

```
INPUT name(s) ;

ASSERT name attribute-name attribute-value
                   [, name attribute-name attribute-value] ...;

                            { attv-name } [           { attv-name } ]
ATTRIBUTES ARE attr-name    {           } [ ,attr-name {           } ]...
                            {  integer  } [           {  integer  } ]

CAUSES event-name(s) ;

CLASSIFICATION classification-name [ integer ]
                   [, classification-name [ integer ]]... ;

                                         element-
CONSISTS OF [ system-parameter ]   group-name

                                             element-
                   [ , [ system-parameter ]  group-name ] ...  ;

CONTAINED IN set-name(s) ;

DESCRIPTION ;
      comment-entry ;

GENERATED BY interface-name(s) ;

HAPPENS system-parameter TIMES-PER interval-name ;

INTERRUPTS process-name(s) ;

KEYWORDS ARE keyword-name(s) ;
```

3.9 INPUT section (continued)

```
                                   { TRUE  }
MAKES condition-name(s)            {       }  ;
                                   { FALSE }

PART OF input-name ;


RECEIVED BY process-name(s) ;


RESPONSIBLE-PROBLEM-DEFINER IS problem-definer-name ;

SECURITY IS security-name(s) ;

SEE-MEMO memo-name(s) ;

SOURCE IS source-name(s) ;


SUBPARTS ARE input-name(s) ;

SYNONYMS ARE synonym-name(s) ;

TERMINATES process-name(s);

TRACE-KEY trace-key-name(s) ;

TRIGGERS process-name(s);

                            [                      set-               ]
                            [      { DERIVE } *output-                ]
USED BY process-name(s)     [  TO  {        }  entity-       name(s)  ] ;
                            [      { UPDATE }  group-                 ]
                            [                  element-               ]
```

* Output-name(s) may only be used with the DERIVE clause.

2.10 INTERFACE section

```
INTERFACE name(s) ;

ASSERT name attribute-name attribute-value
                  [, name attribute-name attribute-value] ...;

                            { attv-name } [                  { attv-name } ]
ATTRIBUTES ARE attr-name    {           } [ ,attr-name       {           } ]...
                            {  integer  } [                  {  integer  } ]

DESCRIPTION ;
        comment-entry ;

GENERATES input-name(s) ;

KEYWORDS ARE keyword-name(s) ;

PART OF interface-name ;

RECEIVES output-name(s) ;

RESPONSIBLE FOR set-name(s) ;

RESPONSIBLE-PROBLEM-DEFINER IS problem-definer-name ;

SECURITY IS security-name(s) ;

SECURITY-ACCESS-RIGHT classification-name [ integer ]
                  [, classification-name [ integer ]]...  ;

SEE-MEMO memo-name(s) ;

SOURCE IS source-name(s) ;

SUBPARTS ARE interface-name(s) ;
```

3.10 INTERFACE section (continued)

SYNONYMS ARE synonym-name(s) ;

TRACE-KEY trace-key-name(s) ;

3.11 INTERVAL section

```
INTERVAL name(s) ;


ASSERT name attribute-name attribute-value

                 [, name attribute-name attribute-value] ...;

                      { attv-name } [                 { attv-name }  ]
ATTRIBUTES ARE attr-name {           } [ ,attr-name {             }  ] ...
                      {  integer  } [                 {  integer  }  ]

CONSISTS OF [ system-parameter ] interval-name

                 [ , [ system-parameter ] interval-name ] ...  ;


DESCRIPTION ;
        comment-entry ;

KEYWORDS ARE keyword-name(s) ;

RESPONSIBLE-PROBLEM-DEFINER IS problem-definer-name ;

SECURITY IS security-name(s) ;

SEE-MEMO memo-name(s) ;

SOURCE IS source-name(s) ;

SYNONYMS ARE synonym-name(s) ;

TRACE-KEY trace-key-name(s) ;
```

3.12 MEMO section

```
MEMO name(s) ;

APPLIES TO non-memo-name(s) ;

ASSERT name attribute-name attribute-value

                      [, name attribute-name attribute-value] ...;

                         { attv-name } [               { attv-name } ]
ATTRIBUTES ARE attr-name {           } [ ,attr-name    {           } ] ;
                         {  integer  } [               {  integer  } ]

DESCRIPTION ;
       comment-entry ;

KEYWORDS ARE keyword-name(s) ;

RESPONSIBLE-PROBLEM-DEFINER IS problem-definer-name ;

SECURITY IS security-name(s) ;

SOURCE IS source-name(s) ;

SYNONYMS ARE synonym-name(s) ;

TRACE-KEY trace-key-name(s) ;
```

3.13 OUTPUT section

```
OUTPUT name(s) ;

ASSERT name attribute-name attribute-value
              [, name attribute-name attribute-value] ...;

                         { attv-name } [             { attv-name } ]
ATTRIBUTES ARE attr-name {           } [ ,attr-name {             } ] ...
                         {  integer  } [             {  integer   } ]

CLASSIFICATION classification-name [ integer ]
              [, classification-name [ integer ]]...  ;
                                        element-
CONSISTS OF [  system-parameter ]  group-name

                                          element-
              [ , [ system-parameter ]   group-name ] ...  ;

CONTAINED IN set-name(s)  ;

                                [          group-          ]
                                [         entity-          ]
DERIVED BY  process-name(s)     [ USING      set-name(s)   ] ;
                                [          input-          ]
                                [        element-          ]

DESCRIPTION ;
        comment-entry ;

GENERATED BY process-name(s) ;

HAPPENS system-parameter TIMES-PER interval-name ;

KEYWORDS ARE keyword-name(s) ;

PART OF output-name ;
```

3.13 OUTPUT section (continued)

RECEIVED BY interface-name(s) ;

RESPONSIBLE-PROBLEM-DEFINER IS problem-definer-name ;

SECURITY IS security-name(s) ;

SEE-MEMO memo-name(s) ;

SOURCE IS source-name(s) ;

SUBPARTS ARE output-name(s) ;

SYNONYMS ARE synonym-name(s) ;

TRACE-KEY trace-key-name(s) ;

3.14 PROBLEM-DEFINER section

```
PROBLEM-DEFINER name(s) ;


ASSERT name attribute-name attribute-value
                [, name attribute-name attribute-value] ...;


                           { attv-name } [                 { attv-name } ]
ATTRIBUTES ARE attr-name  {             } [ ,attr-name  {             } ] ...
                           {  integer  } [                 {  integer  } ]


DESCRIPTION ;
     comment-entry ;


KEYWORDS ARE keyword-name(s) ;


MAILBOX IS mailbox-name ;


RESPONSIBLE FOR name(s) ;


SECURITY IS security-name(s) ;


SEE-MEMO memo-name(s) ;


SOURCE IS source-name(s) ;


SYNONYMS ARE synonym-name(s) ;


TRACE-KEY trace-key-name(s) ;
```

3.15 PROCESS section

```
PROCESS name(s) ;


ASSERT name attribute-name attribute-value
                  [, name attribute-name attribute-value] ...;

                      { attv-name } [                 { attv-name } ]
ATTRIBUTES ARE attr-name {           } [  ,attr-name {             } ]...
                      {  integer  } [                 {  integer  } ]

          set-         [           set-         ]
       output-         [         input-         ]
DERIVES element-name(s) [ USING element-name(s)  ] ;
        entity-        [         entity-        ]
         group-        [          group-        ]


DESCRIPTION ;
       comment-entry ;


GENERATES output-name(s) ;


HAPPENS system-parameter TIMES-PER interval-name ;


INCEPTION-CAUSES event-name(s) ;


                  event-
INTERRUPTED BY    input-name(s) ;
                process-


                                                 { TRUE  }
INTERRUPTED WHEN condition-name BECOMES {       } ;
                                                 { FALSE }


INTERRUPTS process-name(s) ;
```

3.15 PROCESS section (continued)

```
KEYWORDS ARE keyword-name(s) ;

                        relation-
MAINTAINS subsetting-criteria-name(s) ;

                            { TRUE  }
MAKES condition-name(s)     {       } ;
                            { FALSE }

PART OF process-name ;

PERFORMED BY processor-name ;

PROCEDURE ;
        comment-entry ;

RECEIVES input-name(s) ;

RESOURCE-USAGE :

        system-parameter FOR resource-usage-parameter-name;

RESPONSIBLE-PROBLEM-DEFINER IS problem-definer-name ;

SECURITY IS security-name(s) ;

SECURITY-ACCESS-RIGHT classification-name [ integer ]
        [, classification-name [ integer ]]... ;

SEE-MEMO memo-name(s) ;

SOURCE IS source-name(s) ;
```

3.15 PROCESS section (continued)

```
SUBPARTS ARE process-name(s) ;


SYNONYMS ARE synonym-name(s) ;


                    event-
TERMINATED BY      input-name(s) ;
                  process-


                                                  [ TRUE  ]
TERMINATED WHEN condition-name BECOMES [       ] ;
                                                  [ FALSE ]


TERMINATES process-name(s) ;


TERMINATION-CAUSES event-name(s) ;


TRACE-KEY trace-key-name(s) ;


                  event-
TRIGGERED BY     input-name(s) ;
                process-


                                              [ TRUE  ]
TRIGGERED WHEN condition-name BECOMES [       ] ;
                                              [ FALSE ]

TRIGGERS process-name(s) ;


            group-            [             group-          ]
           entity-            [           entity-           ]
UPDATES   element-name(s) [ USING   element-   name(s) ] ;
               set-           [              set-           ]
                              [            input-           ]
```

3.15 PROCESS section (continued)

```
                set-           [                      set-                ]
               input-          [      { DERIVE }    *output-              ]
USES   element-name(s)         [ TO   {        }     element-     name(s) ] ;
               group-          [      { UPDATE }     group-               ]
               entity-         [                     entity-              ]
```

* Output-name(s) may only be used with the DERIVE clause.

UTILIZED BY process-name(s) ;

UTILIZES process-name(s);

3.16 PROCESSOR section

```
PROCESSOR processor-name(s);

ASSERT name attribute-name attribute-value
              [, name attribute-name attribute-value] ...;

                            { attv-name } [                { attv-name } ]
ATTRIBUTES ARE attr-name    {           } [  ,attr-name    {           } ] ..
                            {  integer  } [                {  integer  } ]

CONSUMES resource-name AT RATE OF

       system-parameter PER resource-usage-parameter-name;

DESCRIPTION ;
      comment-entry ;

KEYWORDS ARE keyword-name(s) ;

PART OF processor-name;

PERFORMS process-name(s);

RESPONSIBLE-PROBLEM-DEFINER IS problem-definer-name ;

SECURITY IS security-name(s) ;

SECURITY-ACCESS-RIGHT classification-name [ integer ]
              [, classification-name [ integer ]]...  ;

SEE-MEMO memo-name(s)  ;

SOURCE IS source-name(s)  ;
```

3.16 PROCESSOR section (continued)

SUBPARTS ARE processor-name(s);

SYNONYMS ARE synonym-name(s) ;

TRACE-KEY trace-key-name(s) ;

3.17 RELATION section

```
RELATION name(s) ;

ASSERT name attribute-name attribute-value
                    [, name attribute-name attribute-value] ...;

                         group-
ASSOCIATED-DATA IS element-name(s) ;


                          { attv-name } [               { attv-name } ]
ATTRIBUTES ARE attr-name  {             } [ ,attr-name  {             } ] ..
                          {  integer  } [               {  integer  } ]

BETWEEN entity-name AND entity-name ;

CARDINALITY IS system-parameter ;

CONNECTIVITY IS system-parameter TO system-parameter ;

DERIVATION ;
       comment-entry ;

DESCRIPTION ;
       comment-entry ;

KEYWORDS ARE keyword-name(s) ;

MAINTAINED BY process-name(s) ;

RESPONSIBLE-PROBLEM-DEFINER IS problem-definer-name ;

SECURITY IS security-name(s) ;

SEE-MEMO memo-name(s) ;
```

SOURCE IS source-name(s) ;

3.17 RELATION section (continued)

SYNONYMS ARE synonym-name(s) ;

TRACE-KEY trace-key-name(s) ;

3.19 RESOURCE section

```
RESOURCE resource-name(s) ;


ASSERT name attribute-name attribute-value
                  [, name attribute-name attribute-value] ...;

                          { attv-name } [                 { attv-name } ]
ATTRIBUTES ARE attr-name {             } [ ,attr-name {             } ] ..
                          {  integer  } [                 {  integer  } ]


CONSUMED BY processor-name(s) AT RATE OF

         system-parameter PER resource-usage-parameter-name;


DESCRIPTION ;
      comment-entry ;

KEYWORDS ARE keyword-name(s) ;

MEASURED IN unit-name;

RESPONSIBLE-PROBLEM-DEFINER IS problem-definer-name ;

SECURITY IS security-name(s) ;

SEE-MEMO memo-name(s) ;

SOURCE IS source-name(s) ;

SYNONYMS ARE synonym-name(s) ;

TRACE-KEY trace-key-name(s) ;
```

3.19 RESOURCE-USAGE-PARAMETER section

```
RESOURCE-USAGE-PARAMETER resource-usage-parameter-name(s) ;

ASSERT name attribute-name attribute-value
            [, name attribute-name attribute-value] ...;

                           { attv-name } [               { attv-name } ]
ATTRIBUTES ARE attr-name   {           } [ ,attr-name    {           } ]..
                           {  integer  } [               {  integer  } ]

DESCRIPTION ;
     comment-entry ;

KEYWORDS ARE keyword-name(s) ;

RESOURCE-USAGE-PARAMETER-VALUE :
            system-parameter FOR process-name;

RESPONSIBLE-PROBLEM-DEFINER IS problem-definer-name ;

SECURITY IS security-name(s) ;

SEE-MEMO memo-name(s) ;

SOURCE IS source-name(s) ;

SYNONYMS ARE synonym-name(s) ;

TRACE-KEY trace-key-name(s) ;
```

3.20 SET section

```
SET name(s) ;

ASSERT name attribute-name attribute-value
            [, name attribute-name attribute-value] ...;

                        { attv-name } [              { attv-name } ]
ATTRIBUTES ARE attr-name {           } [ ,attr-name {             } ] ...
                        {  integer  } [              {  integer  } ]

CARDINALITY IS system-parameter ;

CLASSIFICATION classification-name [ integer ]
            [, classification-name [ integer ]]...  ;

                                         input-
CONSISTS OF [ system-parameter ]  output-name
                                         entity-

                                                  input-
            [ , [ system-parameter ]  output-name ] ...  ;
                                                  entity-

DERIVATION ;
      comment-entry ;

                              [              group-             ]
                              [              entity-            ]
DERIVED BY  process-name(s)  [  USING            set-name(s)   ] ;
                              [              input-             ]
                              [             element-            ]

DESCRIPTION ;
      comment-entry ;

KEYWORDS ARE keyword-name(s)  ;

RESPONSIBLE-INTERFACE IS interface-name(s)  ;
```

3.20 SET section (continued)

```
RESPONSIBLE-PROBLEM-DEFINER IS problem-definer-name ;


SECURITY IS security-name(s) ;


SEE-MEMO memo-name(s) ;


SOURCE IS source-name(s) ;


SUBSET OF set-name(s) ;


SUBSETS ARE set-name(s) ;


                                   group-
SUBSETTING-CRITERIA ARE element-name(s) ;
                           subsetting-criterion-


SYNONYMS ARE synonym-name(s) ;


TRACE-KEY trace-key-name(s) ;


                                     [            group-             ]
                                     [           entity-             ]
UPDATED BY  process-name(s) [ USING  element-     name(s) ] ;
                                     [            input-             ]
                                     [              set-             ]


                                 [                      set-                ]
                                 [        { DERIVE }  *output-              ]
USED BY process-name(s) [  TO  {          }   entity-     name(s) ] ;
                                 [        { UPDATE }    group-              ]
                                 [                    element-              ]

* Output-name(s) may only be used with the DERIVE clause.


VOLATILITY-MEMBER ;
     comment-entry ;


VOLATILITY-SET ;
     comment-entry ;
```

3.21 UNIT section

```
UNIT name(s);

ASSERT name attribute-name attribute-value
                [, name attribute-name attribute-value] ...;

                       { attv-name } [             { attv-name } ]
ATTRIBUTES ARE attr-name {           } [ ,attr-name {             } ] ...
                       {  integer  } [             {  integer  } ]

DESCRIPTION :
       comment-entry ;

KEYWORDS ARE keyword-name(s) ;

MEASURES resource-name(s) ;

RESPONSIBLE-PROBLEM-DEFINER IS problem-definer-name ;

SECURITY IS security-name(s) ;

SEE-MEMO memo-name(s) ;

SOURCE IS source-name(s) ;

SYNONYMS ARE synonym-name(s) ;

TRACE-KEY trace-key-name(s) ;
```

4.0 INDIVIDUAL STATEMENTS

The following pages give a description of all allowable UPL statements. With each statement there is a declaration of purpose, the syntax, complementary statements (if any exist), and the rules concerning the type of names allowed in the syntax and restrictions pertaining to the statement. Each page is intended to be a unit by itself; all the information needed for a statement is given on the page for that statement. Therefore, the same information may be given on several different pages.

The statements are listed alphabetically. Statements that may occur in several sections are arranged alphabetically by section type.

4.1 CONDITION section header statement

Purpose:

To indicate a TRUE/FALSE state within the system, and to optionally link that state to EVENTS and/or the initiation of PROCESSES. Thus the analyst has a way to indicate a processing path to be followed when one or more CONDITIONS are satisfied, or alternative processing paths when CONDITIONS are not met.

Syntax:

<u>CONDITION</u> condition-name(s) ;

Usage Rules:

-Must be the first statement in a CONDITION section.

-More than one CONDITION can be defined at a time.

Synonyms:

COND CONDITIONS

Examples:

- CONDITION PAYCHECK-DISTRIBUTED;

ASSERT statement CONDITION section

Purpose:
To associate assertions about the attributes of names with other names for the purposes of consistency checking.

Syntax:

```
ASSERT name attribute-name attribute-value

                [, name attribute-name attribute-value] ...;
```

Complementary Statements:
None.

Usage Rules:
- Name may be any type of name.

Synonyms:

ASRT

Examples:

- ASSERT data-name-1 type character;

- ASRT sine-function arguments 1,
  coord-function arguments 2;

ATTRIBUTES statement CONDITION section

Purpose:

To specify properties or characteristics particular to a given section.

Syntax:

```
                                  { attv-name } [              { attv-name } ]
ATTRIBUTES ARE attr-name {             } [ ,attr-name {             } ]...
                                  {  integer  } [              {  integer  } ]
```

Complementary Statements:

none.

Usage Rules:

-A name may have several ATTRIBUTES

Synonyms:

ATTR ATTRIBUTE

Examples:

- ATTRIBUTES ARE FORMAT NUMERIC, LENGTH 6;
- ATTRIBUTES ARE FREQUENCY 100, VOLUME 10;
- ATTR CHAR ZZZ9V9;

BECOMING CAUSES statement CONDITION section

Purpose:
To specify the EVENT(S) caused by this CONDITION.

Syntax:

```
              { TRUE  }
    BECOMING  {       } CAUSES event-name(s);
              { FALSE }
```

Complementary Statements:
CAUSED statement in the EVENT section.

Usage Rules:

- A CONDITION BECOMING TRUE or FALSE may CAUSE several different EVENTS.

- A CONDITION BECOMING TRUE may CAUSE one set of EVENTS and BECOMING FALSE may CAUSE a second set.

Synonyms:

```
    { BEC  }
    {      } CSS
    { BECG }
```

Examples:

- BECOMING FALSE CAUSES ERROR-DETECTED ;

- BECOMING TRUE CAUSES SUBPROCESS-COMPLETION, MAIN-PROCESS-COMPLETION ;

- BEC T CSS EVENT-1, EVENT-2, EVENT-3 ;

- BECG F CSS TIME-CARD-RECOGNIZED ;

BECOMING INTERRUPTS statement CONDITION section

Purpose:
To specify the PROCESS(ES) interrupted by a change of state for this CONDITION.

Syntax:

```
         { TRUE  }
BECOMING {       } INTERRUPTS process-name(s) ;
         { FALSE }
```

Complementary Statements:
INTERRUPTED statement in the PROCESS section.

Usage Rules:

- A CONDITION BECOMING TRUE or FALSE may INTERRUPT several PROCESSES.

- A CONDITION BECOMING TRUE may INTERRUPT one set of PROCESSES and BECOMING FALSE may INTERRUPT a second set.

Synonyms:

```
{ BEC  }
{      } INTS
{ BECG }
```

Examples:

- BECOMING FALSE INTERRUPTS NORMAL-PROCESSING ;

- BEC T INTS PACK-FOR-SHIPPING, BILLING ;

- BECG F INTS SALARY-COMPUTATION ;

BECOMING TERMINATES statement CONDITION section

Purpose:
To specify a PROCESS/PROCESSES that are terminated when this CONDITION enters a given state.

Syntax:

```
           { TRUE  }
BECOMING   {       } TERMINATES process-name(s) ;
           { FALSE }
```

Complementary Statements:
TERMINATED statement in PROCESS section.

Usage Rules:

- A CONDITION BECOMING TRUE or FALSE may TERMINATE several PROCESSES.

- A CONDITION BECOMING TRUE may TERMINATE one set of PROCESSES and BECOMING FALSE may TERMINATE a second set.

Synonyms:

```
{ BEC  }
{      } TRMS
{ BECG }
```

Examples:

- BECOMING TRUE TERMINATES BILLING-PROCESS ;

- BEC T TERMINATES SALARIED-PAY-COMPUTATION, HOURLY-PAY-COMPUTATION ;

- BECG F TRMS ERROR-HANDLER ;

BECOMING TRIGGERS statement **CONDITION section**

Purpose:
To specify a PROCESS/PROCESSES that are triggered by a change in state for this CONDITION.

Syntax:

```
              { TRUE  }
    BECOMING  {       }  TRIGGERS process-name(s);
              { FALSE }
```

Complementary Statements:
TRIGGERED statement in the PROCESS section.

Usage Rules:

- A CONDITION BECOMING TRUE or FALSE may TRIGGER several PROCESSES.

- A CONDITION BECOMING TRUE may TRIGGER one set of PROCESSES and BECOMING FALSE may TRIGGER a second set.

Synonyms:

```
    { BEC  }
    {      }  TRGS
    { BECG }
```

Examples:

- BECOMING TRUE TRIGGERS BILLING-PROCESS ;

- BEC T TRIGGERS SALARIED-PAY-COMPUTATION, HOURLY-PAY-COMPUTATION ;

- BECG F TRGS ERROR-HANDLER ;

DESCRIPTION statement CONDITION section

Purpose:
To give a text DESCRIPTION of the section being described, and to state any information which cannot be easily or accurately stated with the syntax applicable for a given section.

Syntax:

```
DESCRIPTION ;
        comment-entry ;
```

Complementary Statements:
None.

Usage Rules:
- See chapter 2, section 10, for the rules concerning comment entries.

Synonyms:

DESC

Examples:

```
DESCRIPTION;
   THIS ALLOWS YOU TO DESCRIBE IN NARRATIVE FORM WHAT YOU EXPECT
THIS SECTION TO DO;

DESC;
   ANY RELEVANT INFORMATION GOES HERE;
```

KEYWORDS statement CONDITION section

Purpose:

To selectively retrieve information from the URA data-base. A collection of information may be marked with a unique identifier (KEY) and later retrieved.

Syntax:

```
KEYWORDS ARE keyword-name(s) ;
```

Complementary Statements:

APPLIES statement in DEFINE section for a KEYWORD.

Usage Rules:

-A section may have several KEYWORDS

Synonyms:

KEY KEYWORD

Examples:

- KEYWORD IS PAYROLL;
- KEY IS CON-C1;
- KEYWORDS ARE EMP, EMPL, EMPLOYEE;

MADE statement CONDITION section

Purpose:
To specify those EVENT(S), INPUT(S), and PROCESS(ES) which may set this CONDITION and to indicate the value to which it is set.

Syntax:

```
          { TRUE  }          event-
     MADE {       } BY       input-name(s) ;
          { FALSE }         process-
```

Complementary Statements:
MAKES statement in EVENT, INPUT, and PROCESS sections.

Usage Rules:
- A CONDITION may be set by several EVENTS.

- A CONDITION may be MADE TRUE by one set of EVENTS and MADE FALSE by another set of EVENTS.

Synonyms:

None.

Examples:

- MADE FALSE BY INPUT-ARRIVAL;

- MADE FALSE BY INPUT-ERROR, PROCESSING-ERROR;

- MADE T ERROR-OCCURRENCE;

RESPONSIBLE-PROBLEM-DEFINER statement CONDITION section

Purpose:

To associate the PROBLEM-DEFINER with those sections for which he is RESPONSIBLE.

Syntax:

RESPONSIBLE-PROBLEM-DEFINER IS problem-definer-name ;

Complementary Statements:

RESPONSIBLE FOR statement in PROBLEM-DEFINER section.

Usage Rules:

- Only one PROBLEM-DEFINER may be RESPONSIBLE for any section, hence, this statement may only be used once per section.

Synonyms:

RPD

Examples:

- RESPONSIBLE-PROBLEM-DEFINER IS AL-DICKEY;

- RPD A-HERSHEY;

SECUPITY statement CONDITION sect ion

Purpose:

To associate SECUPITY keys with a section which may be used to limit access to the information given in this section. Note: The SECURITY given refers to the Problem Statement information , not the information in the target system.

Syntax:

SECURITY IS security-name(s) ;

Complementary Statements:

APPLIES statement in a DEFINE section for a SECURITY.

Usage Rules:

- A name may have several SECUPITIES.

Synonyms:

SEC SECURITIES

Examples:

- SECURITY IS PROJECT-MANAGER;
- SECUPITIES APE D-ORMISTON, S-MENNEL;
- SEC L-HANNON;

SEE-MEMO statement CONDITION section

Purpose:

To indicate that information related to this section, and possibly other sections, is contained within the documentation. The information is contained in the MEMO(S) designated herein.

Syntax:

SEE-MEMO memo-name(s) ;

Complementary Statements:

APPLIES statement in a MEMO section.

Usage Rules:

-A section may have several such statements.

Synonyms:

SM SEE-MEMOS

Examples:

- SEE-MEMO RW-05-03-75-01;
- SEE-MEMOS: PROJ-MGR-106, PROJ-MGR-109;
- SM EPB-37, EPB-38;

SOURCE statement CONDITION section

Purpose:
To identify information not contained within the system documentation that is relevant to the understanding of the system. The SOURCE may be a person, a document (such as a practice or guideline), etc.

Syntax:

```
SOURCE IS source-name(s) ;
```

Complementary Statements:
APPLIES statement in DEFINE section for SOURCE name.

Usage Rules:

- A name may have several SOURCES.

Synonyms:

SRC SOURCES

Examples:

- SOURCE IS ENG-LETTER-1-MAY-1973;
- SOURCE: SDP-3-0;

SYNONYMS statement CONDITION section

Purpose:
To give SYNONYMS for the name of the section. Can be used to define short forms (e.g. Abbreviations) for section names in the documentation. A synonym can be used to resolve name conflicts within the system. Thus it is useful for reducing the manual effort of documentation.

Syntax:

<u>SYNONYMS</u> ARE synonym-name(s) ;

Complementary Statements:
DESIGNATE section .

Usage Rules:

- A name may have several SYNONYMS.

Synonyms:

SYN SYNONYM

Examples:

- SYNONYMS ARE C-11, CONDITION-11;

- SYNONYM IS CONDITION-11;

- SYN ALPHA;

TRACE-KEY statement CONDITION section

Purpose:

To associate a list of trace-keys with a name so that correspondences between objects in different data bases may be made.

Syntax:

<u>TRACE-KEY</u> trace-key-name(s) ;

Complementary Statements:

APPLIES statement in DEFINE section for TRACE-KEY name.

Usage Rules:

- The names in the name list must be trace-key names.

Synonyms:

TKEY

Examples:

- TRACE-KEY module-a;
- TKEY part-1, part-2;

WHILE statement CONDITION section

Purpose:
To give an expression on which this CONDITION depends.

Syntax:

```
{ TRUE  }
{       } WHILE ;
{ FALSE }
        comment-entry ;
```

Complementary Statements:
None.

Usage Rules:
-May be given only once for any CONDITION.

Synonyms:

```
{   T   }
{       } WHL
{   F   }
```

Examples::

- TRUE WHILE;
  STILL AN EMPLOYEE;

- FALSE WHILE;
  SYSTEM-BEING-UPDATED;

- T WHL;
  SYSTEM OUTPUT STILL VALID;

4.2 DEFINE section header statement

Purpose:

To describe in greater detail certain name types within URL. For example, if one wished to show a value or range of values for a system parameter, it would be done in this section.

Syntax:

```
                {ATTRIBUTE               }[          {ATTRIBUTE               } ]
                {ATTRIBUTE-VALUE         }[          {ATTRIBUTE-VALUE         } ]
                {CLASSIFICATION          }[          {CLASSIFICATION          } ]
                {KEYWORD                 }[          {KEYWORD                 } ]
                {MAILBOX                 }[          {MAILBOX                 } ]
DEFINE name     {SECURITY                }[, name    {SECURITY                } ] ...   ;
                {SOURCE                  }[          {SOURCE                  } ]
                {SUBSETTING-CRITERION    }[          {SUBSETTING-CRITERION    } ]
                {SYSTEM-PARAMETER        }[          {SYSTEM-PARAMETER        } ]
                {TRACE-KEY               }[          {TRACE-KEY               } ]
```

Usage Rules:

-It must be the first statement in the DEFINE section.

-Several names may be defined at once.

Synonyms:

```
          { ATTR                                      }
          { ATTV                                      }
          { CLS   CLASSIFICATIONS                     }
          { KEY                                       }
          { BOX   MBX                                 }
     DEF  { SEC                                       }
          { SRC                                       }
          { SSCN                                      }
          { SYSP   SYSPAR   SYSTEM-PARAMETERS         }
          { TKEY                                      }
```

Examples:

- DEFINE NAME-A ATTRIBUTE ....DEF NAME-A ATTR
- DEFINE NAME-B ATTRIBUTE-VALUE ....DEF NAME-B ATTV
- DEFINE NAME-C CLASSIFICATION ....DEF NAME-C CLS
- DEFINE NAME-D KEYWORD ....DEF NAME-D KEY
- DEFINE NAME-E MAILBOX ....DEF NAME-E MBX
- DEFINE NAME-F SECURITY ....DEF NAME-F SEC
- DEFINE NAME-G SOURCE ....DEF NAME-G SRC
- DEFINE NAME-H SUBSETTING-CRITERION ..DEF NAME-H SSCN
- DEFINE NAME-I SYSTEM-PARAMETER ......DEF NAME-I SYSP

- DEFINE NAME-J TRACE-KEY ....DEF NAME-J TKEY

APPLIES statement DEFINE section

Purpose:

To tie the information contained in the DEFINE section to any new or revised sections to which it applies.

Syntax:

APPLIES TO name(s) ;

Complementary Statements:

KEYWORDS, MAILBOX, SECURITY, SOURCE AND TRACE-KEY statements.

Usage Rules:

-This statement may only be given in the DEFINE sections for those names which are of the type KEYWORD, SECURITY, SOURCE, MAILBOX, or TRACE-KEY.

-The statement may be given as many times an necessary for the name.

-Multiple APPLIES statements for the same name are equivalent to a single statement with all the names in the list.

Synonyms:

APP

Examples:

-APPLIES TO NETWORK-IDENT;

-APPLIES TO NETWORK-IDENT,COMPANY-AND-AREA,TYPE-MATERIAL;

-APP PROCESS-1;

-APP TO NETWORK-IDENT, COMPANY-AND-AREA, TYPE-MATERIAL;

ASSERT statement DEFINE section

Purpose:
To associate assertions about the attributes of names with other names for the purposes of consistency checking.

Syntax:

```
ASSERT name attribute-name attribute-value
                 [, name attribute-name attribute-value] ...;
```

Complementary Statements:
None.

Usage Rules:
- Name may be any type of name.

Synonyms:

ASRT

Examples:

```
- ASSERT data-name-1 type character;

- ASRT sine-function arguments 1,
          coord-function arguments 2;
```

ATTRIBUTES statement DEFINE section

Purpose:
To specify properties or characteristics particular to a given section.

Syntax:

```
                              { attv-name } [             { attv-name } ]
   ATTRIBUTES ARE attr-name {             } [ ,attr-name {             } ]..
                              {  integer  } [             {  integer  } ]
```

Complementary Statements:
none.

Usage Rules:

-A name may have several ATTRIBUTES

Synonyms:

ATTR ATTRIBUTE

Examples:

- ATTRIBUTES ARE FORMAT NUMERIC, LENGTH 6;
- ATTRIBUTES ARE FREQUENCY 100, VOLUME 10;
- ATTR CHAR ZZZ9V9;

Purpose:

To give a text DESCRIPTION of the section being described, and to state any information which cannot be easily or accurately stated with the syntax applicable for a given section.

Syntax:

```
DESCRIPTION ;
        comment-entry ;
```

Complementary Statements:

None.

Usage Rules:

- See chapter 2, section 10, for the rules concerning comment entries.

Synonyms:

DESC

Examples:

```
DESCRIPTION;
   THIS ALLOWS YOU TO DESCRIBE IN NARRATIVE FORM WHAT YOU EXPECT
THIS SECTION TO DO;

DESC;
   ANY RELEVANT INFORMATION GOES HERE;
```

KEYWORDS statement DEFINE section

Purpose:

To selectively retrieve information from the URA data-base. A collection of information may be marked with a unique identifier (KEY) and later retrieved.

Syntax:

```
KEYWORDS ARE keyword-name(s) ;
```

Complementary Statements:

APPLIES statement in DEFINE section for a KEYWORD.

Usage Rules:

-A section may have several KEYWORDS

Synonyms:

KEY KEYWORD

Examples:

- KEYWORD IS PAYROLL;

- KEY IS CON-C1;

- KEYWORDS ARE EMP, EMPL, EMPLOYEE;

MAINTAINED statement DEFINE section

Purpose:

To give the PROCESSES which maintain a SUBSETTING-CRITERION.

Syntax:

```
MAINTAINED BY process-name(s) ;
```

Complementary Statements:

MAINTAINS statement in PROCESS section.

Usage Rules:

- A SUBSETTING-CRITERION can be MAINTAINED by more than one PROCESS.

- THIS STATEMENT MAY ONLY BE USED TO DESCRIBE subsetting-criterion NAMES.

Synonyms:

MTND

Examples:

- MAINTAINED BY FIRST-PROCESS;

- MTND PROCESS-A, PROCESS-B;

RESPONSIBLE-PROBLEM-DEFINER statement DEFINE section

Purpose:
To associate the PROBLEM-DEFINER with those sections for which he is RESPONSIBLE.

Syntax:

RESPONSIBLE-PROBLEM-DEFINER IS problem-definer-name ;

Complementary Statements:
RESPONSIBLE FOR statement in PROBLEM-DEFINER section.

Usage Rules:

- Only one PROBLEM-DEFINER may be RESPONSIBLE for any section, hence, this statement may only be used once per section.

Synonyms:

RPD

Examples:

- RESPONSIBLE-PROBLEM-DEFINER IS AL-DICKEY;

- RPD A-HERSHEY;

SECURITY statement DEFINE section

Purpose:

To associate SECURITY keys with a section which may be used to limit access to the information given in this section. Note: The SECURITY given refers to the Problem Statement information , not the information in the target system.

Syntax:

```
SECURITY IS security-name(s) ;
```

Complementary Statements:

APPLIES statement in a DEFINE section for a SECURITY.

Usage Rules:

- A name may have several SECURITIES.

Synonyms:

SEC SECURITIES

Examples:

- SECURITY IS PROJECT-MANAGER;
- SECURITIES ARE D-ORMISTON, S-MENNEL;
- SEC L-HANNON;

SEE-MEMO statement DEFINE section

Purpose:
To indicate that information related to this section, and possibly other sections, is contained within the documentation. The information is contained in the MEMO(S) designated herein.

Syntax:

SEE-MEMO memo-name(s) ;

Complementary Statements:
APPLIES statement in a MEMO section.

Usage Rules:
-A section may have several such statements.

Synonyms:

SM SEE-MEMOS

Examples:

- SEE-MEMO BW-05-03-75-01;

- SEE-MEMOS: PROJ-MGR-106, PROJ-MGR-109;

- SM FPB-37, FPB-38;

SOURCE statement DEFINE section

Purpose:

To identify information not contained within the system documentation that is relevant to the understanding of the system. The SOURCE may be a person, a document (such as a practice or guideline), etc.

Syntax:

SOURCE IS source-name(s) ;

Complementary Statements:

APPLIES statement in DEFINE section for SOURCE name.

Usage Rules:

- A name may have several SOURCES.

Synonyms:

SRC SOURCES

Examples:

- SOURCE IS ENG-LETTER-1-MAY-1973;

- SOURCE: SDP-3-0;

SUBSETTING-CRITERION statement DEFINE section

Purpose:
To indicate that this name is used to extract information from a SET to produce a SUBSET.

Syntax:

```
SUBSETTING-CRITERION FOR set-name(s) ;
```

Complementary Statements:
SUBSETTING-CRITERIA statement in a SET section.

Usage Rules:
-The names must be SET names.

-This statement may only be used to describe SUBSETTING-CRITERION names. -A name so defined may be a SUBSETTING-CRITERION for more than one SET.

Synonyms:

SSCN

Examples:

- SUBSETTING-CRITERION FOR SET-GROUP-BANKS, SET-GROUP-CKTS;

- SSCN: FILE-107, FILE-108;

SYNONYMS statement DEFINE section

Purpose:

To give SYNONYMS for the name of the section. Can be used to define short forms (e.g. Abbreviations) for section names in the documentation. A synonym can be used to resolve name conflicts within the system. Thus it is useful for reducing the manual effort of documentation.

Syntax:

<u>SYNONYMS</u> ARE synonym-name(s) ;

Complementary Statements:

DESIGNATE section .

Usage Rules:

- A name may have several SYNONYMS.

Synonyms:

SYN SYNONYM

Examples:

- SYNONYMS ARE ATTR-11, ATTRIBUTE-11;
- SYNONYM IS CLASSIFICATION-11;
- SYN ALPHA;

TRACE-KEY statement DEFINE section

Purpose:

To associate a list of trace-keys with a name so that correspondences between objects in different data bases may be made.

Syntax:

<u>TRACE-KEY</u> trace-key-name(s) ;

Complementary Statements:

APPLIES statement in DEFINE section for TRACE-KEY name.

Usage Rules:

- The names in the name list must be trace-key names.

Synonyms:

TKEY

Examples:

- TRACE-KEY module-a;
- TKEY part-1, part-2;

VALUES statement DEFINE section

Purpose:

To specify the allowable range of VALUES, or specific VALUES, which this SYSTEM-PARAMETER is free to take on. This is useful in determining the need to check data for validity within the system.

Syntax:

```
                  {           integer               }
                  {                                 }
     VALUES ARE   { {  min   }       {     max   }  } ;
                  { {        }  THRU {           }  }
                  { { NEGINF }       {  POSINF   }  }
```

Complementary Statements:

None.

Usage Rules:

- min and max must be integers
- Each min must be less than the corresponding max.

Synonyms:

VAL VALUE

Examples:

- VALUE 107;
- VALUES ARE 1 THRU 9999;
- VALUE NEGINF THRU POSINF;

4.3 DESIGNATE section header statement

Purpose:

To add additional SYNONYMS to names which already exist within the URL data base. This section is useful in standardizing system names, since one accepted name can be referred to by several different SYNONYM names.

Syntax:

```
DESIGNATE name AS A SYNONYM FOR name

     [ , name AS A SYNONYM FOR name ] ...   ;
```

Usage Rules:

-No other statements are allowed in a DESIGNATE section.

-The first name in each pair is taken to be a synonym for the second name in the pair.

Synonyms:

DESG	SYN

Examples:

- DESIGNATE PROC-1 AS A SYNONYM FOR PROCESS-ONE;

- DESIGNATE A-1 AS A SYNONYM FOR ALPHA-MASTER;

- DESG R-1 SYN REPORT-FOR-NEW-MASTER-INPUT;

4.4 ELEMENT section header statement

Purpose:

To allow a detailed description of an ELEMENT. The element is the smallest item of data that can be referred to within the system and still maintain its unique properties.

Syntax:

```
ELEMENT element-name(s) ;
```

Usage Rules:

-Must be the first statement in an ELEMENT section.

-Several ELEMENTS may be defined at once.

Synonyms:

ELE ELEMENTS

Examples:

- ELEMENT CHECK-NUMBER;
- ELEMENTS SPAN-NUMBER, SPAN-MILEAGE;
- ELE EMPLOYEE-NUMBER;

ASSERT statement **ELEMENT section**

Purpose:

To associate assertions about the attributes of names with other names for the purposes of consistency checking.

Syntax:

```
ASSERT name attribute-name attribute-value
                    [, name attribute-name attribute-value] ...;
```

Complementary Statements:

None.

Usage Rules:

- Name may be any type of name.

Synonyms:

ASRT

Examples:

```
- ASSERT data-name-1 type character;

- ASRT sine-function arguments 1,
          coord-function arguments 2;
```

ASSOCIATED statement ELEMENT section

Purpose:
To show that the ELEMENT is jointly owned by two ENTITIES which have been described as having a relationship to each other through a RELATION section.

Syntax:

ASSOCIATED WITH relation-name(s) ;

Complementary Statements:
ASSOCIATED-DATA statement in the RELATION section.

Usage Rules:

-Name(s) must be RELATION names.

-An ELEMENT may be associated with several RELATIONS.

Synonyms:

ASOC

Examples:

- ASSOCIATED WITH RELATION-A;
- ASSOCIATED WITH NETWORK-RELATION, DERIVED-RELATION;
- ASOC RELATION-1, RELATION-2;
- ASOC NEW-RELATION;

ATTRIBUTES statement   ELEMENT section

Purpose:
To specify properties or characteristics particular to a given section.

Syntax:

```
                                  { attv-name } [            { attv-name }  ]
     ATTRIBUTES ARE attr-name     {           } [ ,attr-name {           }  ] ...
                                  {  integer  } [            {  integer  }  ]
```

Complementary Statements:
none.

Usage Rules:

-A name may have several ATTRIBUTES

Synonyms:

ATTR   ATTRIBUTE

Examples:

- ATTRIBUTES ARE FORMAT NUMERIC, LENGTH 6;

- ATTRIBUTES ARE FREQUENCY 100, VOLUME 10;

- ATTR CHAR ZZZ9V9;

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USER REQUIREMENTS LANGUAGE (URL) USER'S MANUAL. PART II. (REFER--ETC(U)
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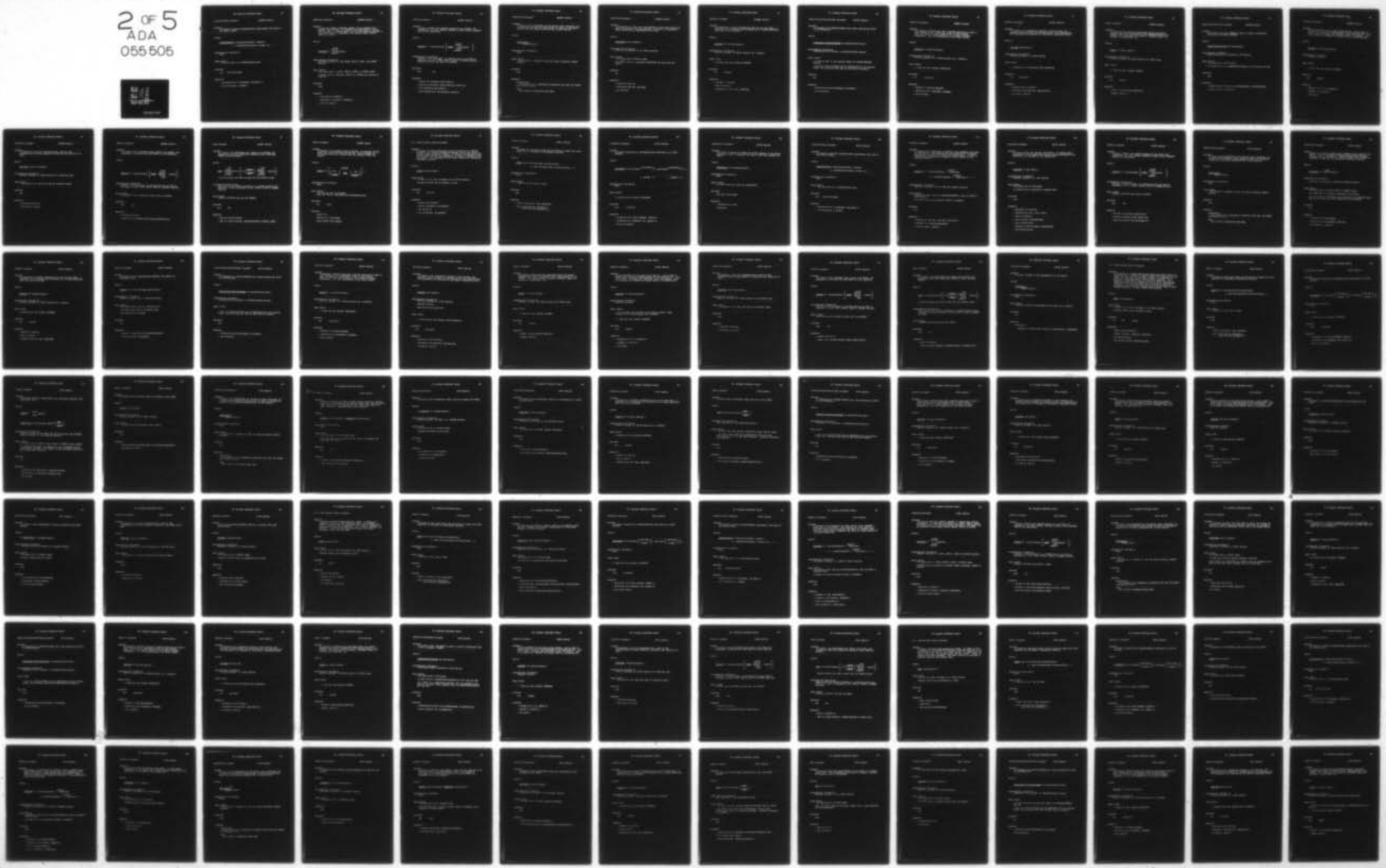

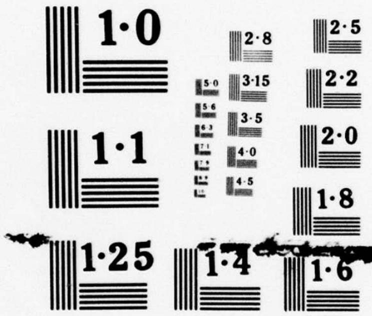
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CLASSIFICATION statement ELEMENT section

Purpose:

To associate security CLASSIFICATION requirements with data in the target system.

Syntax:

```
CLASSIFICATION classification-name [ integer ]
                  [, classification-name [ integer ]]...  ;
```

Complementary Statements:

None.

Usage Rules:

- The name must be a CLASSIFICATION name.

Synonyms:

CLS CLASSIFICATIONS

Examples:

- CLASSIFICATION IS PERSONNEL, SEC-LEVEL 3;
- CLS RING-LEVEL 2, UPDATE;

CONTAINED statement ELEMENT section

Purpose:

To give the GROUPS, ENTITIES, INPUTS, and/or OUTPUTS that contain this ELEMENT. An ELEMENT being contained in a GROUP, ENTITY, INPUT, or OUTPUT means that the data values contained in the ELEMENT will be included in the logical GROUP, ENTITY, INPUT, or OUTPUT.

Syntax:

```
                    group-
                   entity-
    CONTAINED IN   input-name(s) ;
                   output-
```

Complementary Statements:

CONSISTS statement in the GROUP, ENTITY, INPUT, and OUTPUT sections.

Usage Rules:

-The names must be GROUP, ENTITY, INPUT, or OUTPUT names.

-Several GROUPS, ENTITIES, INPUTS, or OUTPUTS may contain an ELEMENT.

Synonyms:

CNTD

Examples:

- CONTAINED IN GROUP-A1;

- CONTAINED IN ENTITY-1, ENTITY-2;

- CNTD IN INPUT-A;

DERIVED statement ELEMENT section

Purpose:

To give a PROCESS that DERIVES values for the ELEMENT and, optionally, the SETS, INPUTS, ENTITIES, GROUPS, and/or ELEMENTS used in the derivation.

Syntax:

```
                                      [          group-          ]
                                      [         entity-          ]
    DERIVED BY   process-name(s)  [  USING    set-name(s)    ] ;
                                      [          input-          ]
                                      [        element-          ]
```

Complementary Statements:

DERIVES or USES statement in a PROCESS section and USED BY statement in a SET, INPUT, ENTITY, GROUP or ELEMENT section. - Several PROCESSES may derive an ELEMENT.

Synonyms:

DRVD USG

Examples:

- DERIVED BY PROCESS-A USING INPUT-1;
- DERIVED BY PROCESS-1 USING ENTITY-A, ENTITY-B;
- DRVD PROCESS-Q USG INPUT-1;
- DRVD PROCESS-NAME USG ENTITY-A, GROUP-B;

DESCRIPTION statement **ELEMENT section**

Purpose:

To give a text DESCRIPTION of the section being described, and to state any information which cannot be easily or accurately stated with the syntax applicable for a given section.

Syntax:

```
DESCRIPTION ;
     comment-entry ;
```

Complementary Statements:

None.

Usage Rules:

- See chapter 2, section 10, for the rules concerning comment entries.

Synonyms:

DESC

Examples:

```
DESCRIPTION;
   THIS ALLOWS YOU TO DESCRIBE IN NARRATIVE FORM WHAT YOU EXPECT
THIS SECTION TO DO;

DESC;
   ANY RELEVANT INFORMATION GOES HERE;
```

Purpose:

To highlight the fact that this ELEMENT is being used within the system to identify data for storage, retrieval, or processing. This ELEMENT may be considered to be a key.

Syntax:

IDENTIFIES entity-name(s) ;

Complementary Statements:

IDENTIFIED statement in the ENTITY section.

Usage Rules:

- The names must be ENTITY names.

- An ELEMENT may be a potential IDENTIFIER for more than one ENTITY.

Synonyms:

IDS

Examples:

- IDENTIFIES ENT-47;

- IDENTIFIES ENT-784, ENT-6387;

- IDS ENT-957;

KEYWORDS statement ELEMENT section

Purpose:
To selectively retrieve information from the URA data-base. A collection of information may be marked with a unique identifier (KEY) and later retrieved.

Syntax:

```
KEYWORDS ARE keyword-name(s) ;
```

Complementary Statements:
APPLIES statement in DEFINE section for a keyword.

Usage Rules:

-A section may have several KEYWORDS

Synonyms:

KEY KEYWORD

Examples:

- KEYWORD IS PAYROLL;
- KEY IS CON-C1;
- KEYWORDS ARE EMP, EMPL, EMPLOYEE;

RESPONSIBLE-PROBLEM-DEFINER statement ELEMENT section

Purpose:

To associate the PROBLEM-DEFINER with those sections for which he is RESPONSIBLE.

Syntax:

RESPONSIBLE-PROBLEM-DEFINER IS problem-definer-name ;

Complementary Statements:

RESPONSIBLE FOR statement in PROBLEM-DEFINER section.

Usage Rules:

- It may be used in any section except the PROBLEM-DEFINER section.
- Only one PROBLEM-DEFINER may be RESPONSIBLE for any section, hence, this statement may only be used once per section.

Synonyms:

RPD

Examples:

- RESPONSIBLE-PROBLEM-DEFINER IS AL-DICKEY;
- RPD A-HERSHEY;

SECURITY statement **ELEMENT section**

Purpose:

To associate SECURITY keys with a section which may be used to limit access to the information given in this section. Note: The SECURITY given refers to the Problem Statement information , not the information in the target system.

Syntax:

```
     SECURITY IS security-name(s) ;
```

Complementary Statements:

APPLIES statement in a DEFINE section for a SECURITY.

Usage Rules:

- A name may have several SECURITIES.

Synonyms:

SEC SECURITIES

Examples:

- SECURITY IS PROJECT-MANAGER;
- SECURITIES ARE D-ORMISTON, S-HENNEL;
- SEC L-HANNON;

SEE-MEMO statement ELEMENT section

Purpose:
To indicate that information related to this section, and possibly other sections, is contained within the documentation. The information is contained in the MEMO(S) designated herein.

Syntax:

```
    SEE-MEMO memo-name(s)  ;
```

Complementary Statements:
APPLIES statement in a MEMO section.

Usage Rules:

- A section may have several such statements.

Synonyms:

```
    SM        SEE-MEMOS
```

Examples:

- SEE-MEMO BW-05-03-75-01;
- SEE-MEMOS: PROJ-MGR-106, PROJ-MGR-109;
- SM EPR-37, EPR-38;

SOURCE statement ELEMENT section

Purpose:

To identify information not contained within the system documentation that is relevant to the understanding of the system. The SOURCE may be a person, a document (such as a practice or guideline), etc.

Syntax:

SOURCE IS source-name(s) ;

Complementary Statements:

APPLIES statement in DEFINE section for SOURCE name.

Usage Rules:

- A name may have several SOURCES.

Synonyms:

SRC SOURCES

Examples:

- SOURCE IS ENG-LETTER-1-MAY-1973;
- SOURCE: SDP-3-0;

SUBSETTING-CRITERION statement ELEMENT section

Purpose:

To indicate that this ELEMENT is used to extract information from a SET to produce a SUBSET.

Syntax:

SUBSETTING-CRITERION FOR set-name(s) ;

Complementary Statements:

SUBSETTING-CRITERIA statement in SET section.

Usage Rules:

-The names must be SET names.

-An ELEMENT may be a SUBSETTING-CRITERION for more than one SET.

Synonyms:

SSCN

Examples:

- SUBSETTING-CRITERION FOR SET-GROUP-BANKS, SET-GROUP-CKTS;

- SSCN: FILE-107, FILE-108;

SYNONYMS statement ELEMENT section

Purpose:

To give SYNONYMS for the name of the section. Can be used to define short forms for section-names in the documentation. Also can be used to resolve name conflicts within the system. Thus it is useful for reducing the manual effort of documentation.

Syntax:

SYNONYMS ARE synonym-name(s) ;

Complementary Statements:

DESIGNATE section.

Usage Rules:

- A name may have several SYNONYMS.

Synonyms:

SYN SYNONYM

Examples:

- SYNONYMS ARE E-11, ELEMENT-11;
- SYNONYM IS ELEMENT-11;
- SYN ALPHA;

TRACE-KEY statement ELEMENT section

Purpose:

To associate a list of trace-keys with a name so that correspondences between objects in different data bases may be made.

Syntax:

```
    TRACE-KEY trace-key-name(s) ;
```

Complementary Statements:

APPLIES statement in DEFINE section for TRACE-KEY name.

Usage Rules:

- The names in the name list must be trace-key names.

Synonyms:

TKEY

Examples:

- TRACE-KEY module-a;

- TKEY part-1, part-2;

UPDATED statement ELEMENT section

Purpose:

To indicate those PROCESSES which UPDATE this ELEMENT, and optionally, to specify the data used to do the updating.

Syntax:

```
                                  [           group-             ]
                                  [           entity-            ]
    UPDATED BY  process-name(s)   [  USING    element-   name(s) ] ;
                                  [           input-             ]
                                  [           set-               ]
```

Complementary Statements:

UPDATES or USES statement in PROCESS section and USED BY statement in INPUT, SET, ENTITY, GROUP or ELEMENT sections.

Usage Rules:

-An ELEMENT may be updated by more than one PROCESS.

Synonyms:

UPDD USG

Examples:

- UPDATED BY P-101;

- UPDD P-103, OUTPUT-P-675354 USING MASTER-FILE-6;

USED statement ELEMENT section

Purpose:
To indicate the PROCESS(ES) that USE(D) this ELEMENT, and optionally, DERIVE(S) OUTPUTS or UPDATE(S) SETS, ENTITIES, GROUPS, and/or ELEMENTS.

Syntax:

```
               set-           [                          set-            ]
             input-           [      { DERIVE }      *output-            ]
     USES  element-name(s)    [ TO  {          }      element-    name(s) ] ;
             group-           [      { UPDATE }         group-           ]
            entity-           [                         entity-           ]
```

* Output-name(s) may only be used with the DERIVE clause.

Complementary Statements:
USES, UPDATES or DERIVES statement in a PROCESS section and DERIVED or UPDATED statement in SET, ENTITY, GROUP or ELEMENT sections.

Usage Rules:
-Several PROCESSES may use the ELEMENT.

Synonyms:

DRV UPD

Examples:

- USED BY PROCESS-UPDATE;

- USED BY LINEAR-PROCESS, INTEGER-PROCESS TO DERIVE ALPHA;

VALUES statement ELEMENT secton

Purpose:

To specify the allowable range of VALUES, or specific VALUES, which this ELEMENT is free to take on. This is useful in determining the need to check data for validity within the system.

Syntax:

```
             {            integer                }
             {                                   }
VALUES ARE   { { min    }          {   max   } } ;
             { {        }   THRU   {         } }
             { { NEGINF }          { POSINF  } }
```

Complementary Statements:

None.

Usage Rules:

- min and max must be integers
- Each min must be less than the corresponding max.

Synonyms:

VAL VALUE

Examples:

- VALUE 197;
- VALUES ARE 1 THRU 9999;
- VALUE NEGINF THRU POSINF;

4.5 ENTITY section header statement

Purpose:

To allow a detailed description of the contents of an ENTITY. An ENTITY is a logical, usable collection of data that serves a unique purpose within the system. An ENTITY is information used by the target system that represents an object or concept of the real world. It is required by the target system for information processing purposes.

Syntax:

```
ENTITY entity-name(s) ;
```

Usage Rules:

-It must be the first statement in an ENTITY section.

-Several ENTITIES may be defined at once.

Synonyms:

ENT ENTITIES

Examples:

- ENTITY ROOT-SEGMENT;

- ENTITY NH-SEGMENT, NI-SEGMENT;

- ENT ENTITY-1;

- ENT NS-SEGMENT, NP-SEGMENT;

ASSERT statement ENTITY section

Purpose:
To associate assertions about the attributes of names with other names for the purposes of consistency checking.

Syntax:

```
ASSERT name attribute-name attribute-value

                 [, name attribute-name attribute-value] ...;
```

Complementary Statements:
None.

Usage Rules:
- Name may be any type of name.

Synonyms:

ASRT

Examples:

- ASSERT data-name-1 type character;

```
- ASRT sine-function arguments 1,
        coord-function arguments 2;
```

ATTRIBUTES statement ENTITY section

Purpose:

To specify properties or characteristics particular to a given section.

Syntax:

```
                          { attv-name } [            { attv-name } ]
ATTRIBUTES ARE attr-name  {           } [ ,attr-name {           } ]...

                          {  integer  } [            {  integer  } ]
```

Complementary Statements:

none.

Usage Rules:

-A name may have several ATTRIBUTES

Synonyms:

ATTR ATTRIBUTE

Examples:

- ATTRIBUTES ARE FORMAT NUMERIC, LENGTH 6;

- ATTRIBUTES ARE FREQUENCY 100, VOLUME 10;

- ATTR CHAR ZZZ9V9;

CARDINALITY statement ENTITY section

Purpose:
To define the number of times this ENTITY appears in the system. This can be used to estimate the size of SETS that contain the ENTITY.

Syntax:

```
    CARDINALITY IS system-parameter ;
```

Complementary Statements:
None.

Usage Rules:
- An ENTITY may only have one CARDINALITY.

Synonyms:

CARD OCCS OCCURRENCES

Examples:

- CARDINALITY IS ONE;

- CARD ONE;

CLASSIFICATION statement ENTITY section

Purpose:
To associate security CLASSIFICATION requirements with data in the target system.

Syntax:

```
    CLASSIFICATION classification-name [ integer ]

                  [, classification-name [ integer ]]...  ;
```

Complementary Statements:
None.

Usage Rules:
- The name must be a CLASSIFICATION name.

Synonyms:

CLS   CLASSIFICATIONS

Examples:

- CLASSIFICATION IS PERSONNEL, SEC-LEVEL 3;

- CLS RING-LEVEL 2, UPDATE;

CONSISIS statement ENTITY section

Purpose:

To describe the combination of GROUPS and/or ELEMENTS which make up this ENTITY. This implies that each instance of the ENTITY will contain values of the GROUP and ELEMENT names. A GROUP or ELEMENT may be repeated the number of times denoted by the SYSTEM-PARAMETER.

Syntax:

```
                                               element-
     CONSISTS OF [ system-parameter ]   group-name

                                                       element-
                      [ , [ system-parameter ]   group-name ] ...  ;
```

Complementary Statements:

CONTAINED statement in the GROUP and ELEMENT sections.

Usage Rules:

-The names, other than the SYSTEM-PARAMETERS , must be GROUP or ELEMENT names.

-An ENTITY can contain several GROUPS or ELEMENTS.

Synonyms:

CSTS

Examples:

- CONSISTS OF ONE GR-1, ONE GR-2, TWO ELE-5 ;

- CONSISTS OF: UNIQUE-SPAN-NUMBER;

- CSTS TWO ELE-A, GROUP-7 ;

CONTAINED statement ENTITY section

Purpose:

To give the SETS that contain this ENTITY. An ENTITY being contained in a SET means that the data values contained in the ENTITY will be included in the logical SET.

Syntax:

```
CONTAINED IN set-name(s) ;
```

Complementary Statements:

CONSISTS statement in a SET section.

Usage Rules:

-The names must be SET names.

-An ENTITY can be contained in several SETS.

Synonyms:

CNTD

Examples:

- CONTAINED IN INPUT-HS;
- CONTAINED IN: HS-1, HS-2, HS-3;
- CNTD IN FIRST-HS;
- CNTD: HS-ONE, OUTPUT-HS-ONE;
- CNTD: MASTER-FILE;
- CONTAINED PAYROLL-CHANGE, NAME-DELETE;
- CNTD NEW-EMPLOYEE;

DERIVED statement ENTITY section

Purpose:

To give a PROCESS that DERIVES values for the ENTITY and, optionally, the SETS, INPUTS, ENTITIES, GROUPS, and/or ELEMENTS used in the derivation.

Syntax:

```
                                  [         group-        ]
                                  [        entity-        ]
DERIVED BY  process-name(s)  [ USING     set-name(s)    ] ;
                                  [         input-        ]
                                  [       element-        ]
```

Complementary Statements:

DERIVES or USES statement in a PROCESS section and USED BY statement in a SET, INPUT, ENTITY, GROUP or ELEMENT section.

Usage Rules:

-Several PROCESSES may derive an ENTITY.

Synonyms:

DRVD USG

Examples:

- DERIVED BY A-PROCESS USING ELT-1;
- DERIVED B-PROCESS USING ENTITY-456;
- DRVD OUT-PROCESS USG GROUP-SPAN-13;

DESCRIPTION statement ENTITY section

Purpose:

To give a text DESCRIPTION of the section being described, and to state any information which cannot be easily or accurately stated with the syntax applicable for a given section.

Syntax:

```
DESCRIPTION ;
        comment-entry ;
```

Complementary Statements:

None.

Usage Rules:

- See chapter 2, section 10, for the rules concerning comment entries.

Synonyms:

DESC

Examples:

```
DESCRIPTION;
    THIS ALLOWS YOU TO DESCRIBE IN NARRATIVE FORM WHAT YOU EXPECT
THIS SECTION TO DO;

DESC;
    ANY RELEVANT INFORMATION GOES HERE;
```

IDENTIFIED statement ENTITY section

Purpose:

To give the possible GROUPS and/or ELEMENTS which identify this ENTITY. This is necessary to uniquely distinguish multiple instances of the same ENTITY. This statement can be viewed as defining a unique key for information retrieval purposes.

Syntax:

```
                 group
IDENTIFIED BY element-name(s) ;
```

Complementary Statements:

IDENTIFIES statements in GROUP and ELEMENT sections.

Usage Rules:

-The names must be either GROUP or ELEMENT names.

-An ENTITY may have several alternative identifiers.

-If the ENTITY is IDENTIFIED by a GROUP then the ELEMENTS which make up the GROUP are taken together as an identifier.

Synonyms:

IDD

Examples:

- IDENTIFIED BY SPAN-NUMBER;

- IDENTIFIED BY SPAN-NUMBER, SPAN-LOG;

- IDD ELEMENT-1, GROUP-1;

KEYWORDS statement ENTITY section

Purpose:

To selectively retrieve information from the URA data-base. A collection of information may be marked with a unique identifier (KEY) and later retrieved.

Syntax:

```
KEYWORDS ARE keyword-name(s) ;
```

Complementary Statements:

APPLIES statement in DEFINE section for a keyword.

Usage Rules:

-A section may have several KEYWORDS

Synonyms:

KEY KEYWORD

Examples:

- KEYWORD IS PAYROLL;
- KEY IS CON-C1;
- KEYWORDS ARE EMP, EMPL, EMPLOYEE;

RELATED statement ENTITY section

Purpose:
To identify which RELATIONS and ENTITIES this ENTITY is associated with.

Syntax:

RELATED TO entity-name VIA relation-name ;

Complementary Statements:
BETWEEN statement in the RELATION section.

Usage Rules:

-The second name must be a RELATION name.

-The first name must be an ENTITY name.

-All RELATIONS are binary.

Synonyms:

REL

Examples:

- RELATED TO NH-ENTITY VIA UPDATE-RELATION;

- REL NI-SEG VIA NI-RELATION;

RESPONSIBLE-PROBLEM-DEFINER statement ENTITY section

Purpose:

To associate the PROBLEM-DEFINER with those sections for which he is RESPONSIBLE.

Syntax:

<u>RESPONSIBLE-PROBLEM-DEFINER</u> IS problem-definer-name ;

Complementary Statements:

RESPONSIBLE FOR statement in PROBLEM-DEFINER section.

Usage Rules:

- Only one PROBLEM-DEFINER may be RESPONSIBLE for any section, hence, this statement may only be used once per section.

Synonyms:

RPD

Examples:

- RESPONSIBLE-PROBLEM-DEFINER IS AL-DICKEY;

- RPD A-HERSHEY;

SECURITY statement ENTITY section

Purpose:
To associate SECURITY keys with a section which may be used to limit access to the information given in this section. Note: The SECURITY given refers to the Problem Statement information , not the information in the target system.

Syntax:

SECURITY IS security-name(s) ;

Complementary Statements:
APPLIES statement in a DEFINE section for a SECURITY.

Usage Rules:

- A name may have several SECURITIES.

Synonyms:

SEC SECURITIES

Examples:

- SECURITY IS PROJECT-MANAGER;
- SECURITIES ARE D-ORMISTON, S-MENNEL;
- SEC L-HANNON;

SEE-MEMO statement ENTITY section

Purpose:

To indicate that information related to this section, and possibly other sections, is contained within the documentation. The information is contained in the MEMO(S) designated herein.

Syntax:

SEE-MEMO memo-name(s) ;

Complementary Statements:

APPLIES statement in a MEMO section.

-SOURCES SDP-3-0;

-SRC ENG-LETTER-1-MAY-1973;

Usage Rules:

- A section may have several such statements.

Synonyms:

SM	SEE-MEMOS

Examples:

- SEE-MEMO BW-05-03-75-01;
- SEE-MEMOS: PROJ-MGR-106, PROJ-MGR-109;
- SM EPB-37, EPB-38;

SOURCE statement ENTITY section

Purpose:

To identify information not contained within the system documentation that is relevant to the understanding of the system. The SOURCE may be a person, a document (such as a practice or guideline), etc.

Syntax:

SOURCE IS source-name(s) ;

Complementary Statements:

APPLIES statement in DEFINE section for SOURCE name.

Usage Rules:

- A name may have several SOURCES.

Synonyms:

SRC SOURCES

Examples:

- SOURCE IS ENG-LETTER-1-MAY-1973;
- SOURCE: SDP-3-0;

SYNONYMS statement ENTITY section

Purpose:
To give SYNONYMS for the name of the section. Can be used to define short forms for section-names in the documentation. Also can be used to resolve name conflicts within the system. Thus it is useful for reducing the manual effort of documentation.

Syntax:

SYNONYMS ARE synonym-name(s) ;

Complementary Statements:
DESIGNATE section.

Usage Rules:

- The statement may be used in any section except a MEMO section, or a DEFINE section for a SYNONYM.

- A name may have several SYNONYMS.

Synonyms:

SYN	SYNONYM

Examples:

- SYNONYMS ARE E-11, ENTITY-11;

- SYNONYM IS ENTITY-11;

- SYN ALPHA;

TRACE-KEY statement ENTITY section

Purpose:
To associate a list of trace-keys with a name so that correspondences between objects in different data bases may be made.

Syntax:

TRACE-KEY trace-key-name(s) ;

Complementary Statements:
APPLIES statement in DEFINE section for TRACE-KEY name.

Usage Rules:
- The names in the name list must be trace-key names.

Synonyms:

TKEY

Examples:

- TRACE-KEY module-a;

- TKEY part-1, part-2;

UPDATED statement ENTITY section

Purpose:
To indicate those PROCESSES which update this ENTITY, and optionally, to specify the data used to do the updating.

Syntax:

```
                                [              group-          ]
                                [             entity-          ]
UPDATED BY  process-name(s)     [ USING      element-  name(s) ] ;
                                [              input-          ]
                                [                set-          ]
```

Complementary Statements:
UPDATES or USES statement in PROCESS section and USED BY statement in INPUT, SET, ENTITY, GROUP or ELEMENT sections.

Usage Rules:
-An ENTITY may be UPDATED by more than one PROCESS.

Synonyms:

UPDD USG

Examples:

- UPDATED BY P-101;

- UPDD P-103, OUTPUT-P-675354 USING MASTER-FILE-4;

USED statement ENTITY section

Purpose:
To indicate the PROCESS(ES) that USE(D) this ENTITY, and optionally, DERIVE(S) OUTPUTS or UPDATE(S) SETS, ENTITIES, GROUPS,

Syntax:

```
                                [             set-          ]
                                [ { DERIVE } *output-       ]
    USED BY process-name(s) [ TO {          }  entity-   name(s) ] ;
                                [ { UPDATE }   group-       ]
                                [             element-      ]
```

* Output-name(s) may only be used with the DERIVE clause.

Complementary Statements:
USES, UPDATES or DERIVES statement in a PROCESS section and DERIVED or UPDATED statement in SET, ENTITY, GROUP or ELEMENT sections.

Usage Rules:
-Several PROCESSES may use the ENTITY.

Synonyms:

DEV UPD

Examples:

- USED BY PROCESS;

- USED BY LINEAR-PROCESS, INTEGER-PROCESS TO UPDATE ENT-1;

VOLATILITY statement ENTITY section

Purpose:
To give a measure of the changability of the ENTITY.

Syntax:

```
     VOLATILITY ;
            comment-entry ;
```

Complementary Statements:
None.

Usage Rules:
-Only one VOLATILITY statement may be given for an ENTITY.

Synonyms:

VOL

Examples:

```
     VOLATILITY;

         SEGMENT IS UPDATED EACH TIME AN SR TRANSACTION IS REQUESTED;
```

4.6 EVENT section header statement

Purpose:

To describe the dynamic occurrences which take place within the target system. An EVENT is used to describe an instance of time during the operation of the target system. An EVENT may re-occur more than once during target system operation. For example, " occurrence of error " may be an EVENT which causes normal processing to be suspended while an error processor is initiated. An EVENT may occur when a PROCESS is started or finished, when a CONDITION becomes TRUE or FALSE, when an INPUT becomes available, or when another EVENT occurs.

Syntax:

<u>EVENT</u> event-name(s) ;

Usage Rules:

-It must be the first statement in an EVENT section.

-Several EVENTS may be defined at once.

Synonyms:

EV EVT EVENTS

Examples:

- EVENT TIME-CARD-ENTRY;
- EVENTS REGISTER, CHECK-IN, CHECK-OUT;
- EV CARRIER-ALARM;
- EVT CARRIER-ALARM, CARRIER-FAILURE;

ASSERT statement EVENT section

Purpose:
To associate assertions about the attributes of names with other names for the purposes of consistency checking.

Syntax:

```
ASSERT name attribute-name attribute-value
                  [, name attribute-name attribute-value] ...;
```

Complementary Statements:
None.

Usage Rules:
- Name may be any type of name.

Synonyms:

ASRT

Examples:

```
- ASSERT data-name-1 type character;

- ASRT sine-function arguments 1,
         coord-function arguments 2;
```

ATTRIBUTES statement EVENT section

Purpose:
To specify properties or characteristics particular to a given section.

Syntax:

```
                                { attv-name } [             { attv-name } ]
   ATTRIBUTES ARE attr-name {           } [ ,attr-name {             } ]..
                                {  integer  } [             {  integer   } ]
```

Complementary Statements:
none.

Usage Rules:

-A name may have several ATTRIBUTES

Synonyms:

ATTR ATTRIBUTE

Examples:

- ATTRIBUTES ARE FORMAT NUMERIC, LENGTH 6;

- ATTRIBUTES ARE FREQUENCY 100, VOLUME 10;

- ATTR CHAR ZZZ9V9;

CAUSED statement   EVENT section

Purpose:
To specify INPUT(S), CONDITION(S), or additional EVENT(S) which cause this EVENT.

Syntax:

```
                      event-
    CAUSED BY                 name(s)  ;
                      input-


                                                 { TRUE  }
    CAUSED WHEN condition-name BECOMES           {       };
                                                 { FALSE }
```

Complementary Statements:
CAUSES statement in the EVENT and INPUT sections, and BECOMING CAUSES statement in the CONDITION section.

Usage Rules:

- AN EVENT may be CAUSED by any number of EVENTS and/or INPUTS.

- A separate statement is required for each CONDITION change which CAUSES an EVENT. Any number of such statements may appear in a single EVENT section.

Synonyms:

CSD

Examples:

- CAUSED BY TIME-CARD-INPUT, DEADLINE-REACHED;

- CAUSED WHEN ERROR-FLAG-SET BECOMES TRUE;

- CSD ORDERS;

CAUSES statement EVENT section

Purpose:
To specify other EVENT(S) which are caused by this EVENT.

Syntax:

```
     CAUSES event-name(s)  ;
```

Complementary Statements:
CAUSED statement in the EVENT section.

Usage Rules:
- An EVENT may CAUSE several other EVENTS.

Synonyms:

CSS

Examples:

- CAUSES SUBPROCESS-COMPLETION, MAIN-PROCESS-COMPLETION ;
- CSS ERROR-DETECTED ;

DESCRIPTION statement EVENT section

Purpose:
To give a text DESCRIPTION of the section being described, and to state any information which cannot be easily or accurately stated with the syntax applicable for a given section.

Syntax:

```
    DESCRIPTION ;
          comment-entry ;
```

Complementary Statements:
None.

Usage Rules:
- See chapter 2, section 10, for the rules concerning comment entries.

Synonyms:

DESC

Examples:

```
    DESCRIPTION:
       THIS ALLOWS YOU TO DESCRIBE IN NARRATIVE FORM WHAT YOU EXPECT
    THIS SECTION TO DO;

    DESC;
       ANY RELEVANT INFORMATION GOES HERE;
```

HAPPENS statement EVENT section

Purpose:
To give the number of times an EVENT occurs during an INTERVAL. More than one instance of an EVENT may occur over some period of time. The number of instances of the EVENT which occur in a time INTERVAL is expressed with this statement.

Syntax:

HAPPENS system-parameter TIMES-PER interval-name ;

Complementary Statements:
None.

Usage Rules:
- The name must be an INTERVAL name.
- The statement may be given as many times as necessary for different INTERVALS.

Synonyms:

HAP	TIMP

Example:

- HAPPENS FORTY-SEVEN TIMES-PER INTERVAL-A;

- HAP THIRTY-TWO TIMP INT-B;

INCEPTION statement EVENT section

Purpose:
To specify those PROCESS(ES) whose inception causes this EVENT.

Syntax:

ON <u>INCEPTION</u> OF process-name(s) ;

Complementary Statements:
INCEPTION-CAUSES statement in a PROCESS section.

Usage Rules:

- The names must be PROCESS names.
- Several PROCESSES may be given.

Synonyms:

INCP

Examples:

- ON INCEPTION OF PROCESS-IN;
- INCEPTION OF PROCESS-OUT;
- INCP SORT-ALPHA;

INTERRUPTS statement EVENT section

Purpose:
To specify those PROCESS(ES) which are interrupted as a result of this EVENT.

Syntax:

```
INTERRUPTS process-name(s);
```

Complementary Statements:
INTERRUPTED statement in the PROCESS section.

Usage Rules:
- An EVENT may INTERRUPT several PROCESSES.

Synonyms:

INTS

Examples:

- INTERRUPTS MAIN-PROCESSING ;

- INTS MASTER-FILE-SEARCH, PAYSYSTEM-PROCESSING;

KEYWORDS statement EVENT section

Purpose:

To selectively retrieve information from the URA data-base. A collection of information may be marked with a unique identifier (KEY) and later retrieved.

Syntax:

```
KEYWORDS ARE keyword-name(s) ;
```

Complementary Statements:

APPLIES statement in DEFINE section for a KEYWORD.

Usage Rules:

-A section may have several KEYWORDS

Synonyms:

KEY KEYWORD

Examples:

- KEYWORD IS PAYROLL;
- KEY IS CON-C1;
- KEYWORDS ARE EMP, EMPL, EMPLOYEE;

MAKES statement EVENT section

Purpose:
To give those CONDITION(S) which are set by this EVENT.

Syntax:

```
                                 { TRUE  }
     MAKES condition-name(s)     {       }  ;
                                 { FALSE }
```

Complementary Statements:
MADE statement in the CONDITION section.

Usage Rules:

- An EVENT may make several CONDITIONS become TRUE or FALSE.

- An EVENT cannot MAKE some CONDITION(S) TRUE and other CONDITION(S) FALSE in the same statement. Separate statements are required.

Synonyms:

MAK

Examples:

- MAKES PROCESS-COMPLETION TRUE ;

- MAK ERROR-OCCURRENCE, OUTPUT-INTERRUPTION F ;

RESPONSIBLE-PROBLEM-DEFINER statement EVENT section

Purpose:

To associate the PROBLEM-DEFINER with those sections for which he is RESPONSIBLE.

Syntax:

<u>RESPONSIBLE-PROBLEM-DEFINER</u> IS problem-definer-name ;

Complementary Statements:

RESPONSIBLE FOR statement in PROBLEM-DEFINER section.

Usage Rules:

- Only one PROBLEM-DEFINER may be RESPONSIBLE for any section, hence, this statement may only be used once per section.

Synonyms:

RPD

Examples:

- RESPONSIBLE-PROBLEM-DEFINER IS AL-DICKEY;

- RPD A-HERSHEY;

SECURITY statement EVENT section

Purpose:

To associate SECURITY keys with a section which may be used to limit access to the information given in this section. Note: The SECURITY given refers to the Problem Statement information , not the information in the target system.

Syntax:

<u>SECURITY</u> IS security-name(s) ;

Complementary Statements:

APPLIES statement in a DEFINE section for a SECURITY.

Usage Rules:

- A name may have several SECURITIES.

Synonyms:

SEC SECURITIES

Examples:

- SECURITY IS PROJECT-MANAGER;

- SECURITIES ARE D-ORMISTON, S-MENNEL;

- SEC L-HANNON;

SEE-MEMO statement EVENT section

Purpose:

To indicate that information related to this section, and possibly other sections, is contained within the documentation. The information is contained in the MEMO(S) designated herein.

Syntax:

SEE-MEMO memo-name(s) ;

Complementary Statements:

APPLIES statement in a MEMO section.

Usage Rules:

- A section may have several such statements.

Synonyms:

SM SEE-MEMOS

Examples:

- SEE-MEMO BW-05-03-75-01;
- SEE-MEMOS: PROJ-MGR-106, PROJ-MGR-109;
- SM EPB-37, EPB-38;

SOURCE statement EVENT section

Purpose:

To identify information not contained within the system documentation that is relevant to the understanding of the system. The SOURCE may be a person, a document (such as a practice or guideline), etc.

Syntax:

SOURCE IS source-name(s) ;

Complementary Statements:

APPLIES statement in DEFINE section for SOURCE name.

Usage Rules:

- A name may have several SOURCES.

Synonyms:

SRC SOURCES

Examples:

- SOURCE IS ENG-LETTER-1-MAY-1973;
- SOURCE: SDP-3-0;

SYNONYMS statement EVENT section

Purpose:

To give SYNONYMS for the name of the section. Can be used to define short forms for section-names in the documentation. Also can be used to resolve name conflicts within the system. Thus it is useful for reducing the manual effort of documentation.

Syntax:

SYNONYMS ARE synonym-name(s) ;

Complementary Statements:

DESIGNATE section.

Usage Rules:

- A name may have several SYNONYMS.

Synonyms:

SYN SYNONYM

Examples:

- SYNONYMS ARE E-11, EVENT-11;

- SYNONYM IS EVENT-11;

- SYN ALPHA;

TERMINATES statement EVENT section

Purpose:
To specify a PROCESS/PROCESSES that are terminated by this EVENT.

Syntax:

TERMINATES process-name(s);

Complementary Statements:
TERMINATED statement in PROCESS section.

Usage Rules:

- An EVENT may TERMINATE several PROCESSES.

Synonyms:

TRMS

Examples:

- TERMINATES INPUT-PROCESSING;

- TRMS PROC-A, PROC-B, PROC-C ;

Purpose:
To indicate those PROCESS(ES) on whose TERMINATION this EVENT occurs.

Syntax:

ON TERMINATION OF process-name(s) ;

Complementary Statements:
TERMINATION-CAUSES statement in a PROCESS section.

Usage Rules:
- The names must be PROCESS names.
- Several PROCESSES may be given.

Synonyms:

TERM

Examples:

- ON TERMINATION OF INPUT-PROCESS;
- TERMINATION UPDATE-PROCESS;
- TERM FORECAST-PROCESS;

TRACE-KEY statement EVENT section

Purpose:
To associate a list of trace-keys with a name so that correspondences between objects in different data bases may be made.

Syntax:

TRACE-KEY trace-key-name(s) ;

Complementary Statements:
APPLIES statement in DEFINE section for TRACE-KEY name.

Usage Rules:
- The names in the name list must be trace-key names.

Synonyms:

TKEY

Examples:

- TRACE-KEY module-a;

- TKEY part-1, part-2;

TRIGGERS statement EVENT section

Purpose:

To give the PROCESS/PROCESSES which are triggered when this EVENT occurs.

Syntax:

TRIGGERS process-name(s) ;

Complementary Statements:

TRIGGERED statement in PROCESS section.

Usage Rules:

- The names must be PROCESS names.
- Several PROCESSES may be triggered by any EVENT.

Synonyms:

TRGS

examples:

- TRIGGERS UPDATE-PROCESS;
- TRIGGERS P-101,P-420,P-7598;
- TRGS EXTRA-LINK-PROCESS;

4.7 GROUP section header statement

Purpose:

To allow a detailed description of a GROUP. A GROUP is a logical collection of data ELEMENTS and/or other GROUPS. A GROUP is a collection of information which can be CONTAINED in larger collections of information. E.g. INPUTS, OUTPUTS, and ENTITIES. For instance, current-date might be a GROUP containing month, day and year.

Syntax:

GROUP group-name(s) ;

Usage Rules:

-It must be the first statement in a GROUP section.

-Several GROUPS may be defined at once.

Synonyms:

GR GROUPS

Examples:

- GROUP SPAN-MAKEUP;

- GROUPS: SPAN-A, LINK-A;

- GR GROUP-A;

- GR: SPAN-784, LINK-737;

ASSERT statement GROUP section

Purpose:

To associate assertions about the attributes of names with other names for the purposes of consistency checking.

Syntax:

```
ASSERT name attribute-name attribute-value
                    [, name attribute-name attribute-value] ...;
```

Complementary Statements:

None.

Usage Rules:

- Name may be any type of name.

Synonyms:

ASRT

Examples:

```
- ASSERT data-name-1 type character;

- ASRT sine-function arguments 1,
       coord-function arguments 2;
```

ASSOCIATED statement GROUP section

Purpose:
To show that the GROUP is jointly owned by two ENTITIES which have been described as having a relationship to each other through a RELATION section.

Syntax:

```
ASSOCIATED WITH relation-name(s) ;
```

Complementary Statements:
ASSOCIATED-DATA statement in a RELATION section.

Usage Rules:

-The names must be RELATION names.

-A GROUP may be associated with several RELATIONS.

Synonyms:

ASOC

Examples:

- ASSOCIATED WITH EMPLOYED-BY-RELATION;

- ASSOCIATED WITH NAME-RELATION, DATE-RELATION, TIME-RELATION;

- ASOC RELATION-C1;

- ASOC RELATION-C1,RELATION-C2,RELATION-C3;

ATTRIBUTES statement GROUP section

Purpose:
To specify properties or characteristics particular to a given section.

Syntax:

```
                                { attv-name } [                  { attv-name } ]
    ATTRIBUTES ARE attr-name    {           } [ ,attr-name       {           } ] ...
                                {  integer  } [                  {  integar  } ]
```

Complementary Statements:
none.

Usage Rules:

-A name may have several ATTRIBUTES

Synonyms:

ATTR ATTRIBUTE

Examples:

- ATTRIBUTES ARE FORMAT NUMERIC, LENGTH 6;

- ATTRIBUTES ARE FREQUENCY 100, VOLUME 10;

- ATTR CHAR ZZZ9V9;

CLASSIFICATION statement GROUP section

Purpose:

To associate security CLASSIFICATION requirements with data in the target system.

Syntax:

```
CLASSIFICATION classification-name [ integer ]
                   [, classification-name [ integer ]]...  ;
```

Complementary Statements:

None.

Usage Rules:

- The name must be a CLASSIFICATION name.

Synonyms:

CLS   CLASSIFICATIONS

Examples:

- CLASSIFICATION IS PERSONNEL, SEC-LEVEL 3;

- CLS RING-LEVEL 2, UPDATE;

CONSISTS statement GROUP section

Purpose:

To describe the combination of other GROUPS and/or ELEMENTS which make up this GROUP. This implies that each instance of the GROUP will contain values of the GROUP and ELEMENT names. A GROUP or ELEMENT may be repeated the number of times denoted by the SYSTEM-PARAMETER.

Syntax:

```
                                          element-
CONSISTS OF [  system-parameter  ]  group-name

                                                element-
              [ , [ system-parameter ]    group-name ] ...   ;
```

Complementary Statements:

CONTAINED statement in a GROUP or ENTITY section.

Usage Rules:

-The names, other than the system-parameters, must be GROUP or ELEMENT names.

-A GROUP can contain several GROUPS or ELEMENTS.

Synonyms:

CSTS

Examples:

- CONSISTS OF TWO DATA-GROUP-1;

- CONSISTS: DATA-GROUP-1, ELEMENT-A;

- CSTS OF SPAN-ELEMENT-A;

- CSTS: GROUP-NO-1, GROUP-NO-2;

CONTAINED statement GROUP section

Purpose:

To give the ENTITIES, INPUTS, OUTPUTS, or GROUPS that contain this GROUP. A GROUP being contained in a GROUP, ENTITY, INPUT, or OUTPUT means that the data values contained in the GROUP will be included in the logical GROUP, ENTITY, INPUT, or OUTPUT.

Syntax:

```
                 group-
                entity-
CONTAINED IN           -name(s) ;
                 input-
                output-
```

Complementary Statements:

CONSISTS statement in GROUP, ENTITY, INPUT and OUTPUT sections .

Usage Rules:

-The names must be GROUP, ENTITY, INPUT or OUTPUT names.

-A GROUP may be contained in several GROUPS, ENTITIES, INPUTS or OUTPUTS.

Synonyms:

CNTD

Examples:

- CONTAINED IN GROUP-1;

- CONTAINED IN GROUP-2, INPUT-2, OUTPUT-REP;

- CNTD IN FIRST-ENTITY;

DERIVED statement GROUP section

Purpose:
To give a PROCESS that DERIVES values for the GROUP and, optionally, the SETS, INPUTS, ENTITIES, GROUPS, and/or ELEMENTS used in the derivation.

Syntax:

```
                                 [         group-           ]
                                 [        entity-           ]
DERIVED BY  process-name(s)     [ USING     set-name(s)    ] ;
                                 [          input-          ]
                                 [        element-          ]
```

Complementary Statements:
DERIVES or USES statement in a PROCESS section and USED BY statement in a SET, INPUT, ENTITY, GROUP or ELEMENT section.

Usage Rules:
- Several PROCESSES may derive a GROUP.

Synonyms:

DRVD USG

Examples:

- DERIVED BY PROC-NAME USING GROUP-22;
- DERIVED BY PAYROLL-PROCESSING USING PAY-MAST, PAY-STMT;
- DRVD SPAN-UPDATE USG SPAN-NO, MILES;

Purpose:

To give a text DESCRIPTION of the section being described, and to state any information which cannot be easily or accurately stated with the syntax applicable for a given section.

Syntax:

```
DESCRIPTION ;
      comment-entry ;
```

Complementary Statements:

None.

Usage Rules:

- See chapter 2, section 10, for the rules concerning comment entries.

Synonyms:

DESC

Examples:

```
DESCRIPTION;
   THIS ALLOWS YOU TO DESCRIBE IN NARRATIVE FORM WHAT YOU EXPECT
THIS SECTION TO DO;
DESC;
   ANY RELEVANT INFORMATION GOES HERE;
```

IDENTIFIES statement GROUP section

Purpose:

To highlight the fact that this GROUP is being used within the system to identify data for storage, retrieval, or processing. This GROUP may be considered to be a key in the target system.

Syntax:

IDENTIFIES entity-name(s) ;

Complementary Statements:

IDENTIFIED statement in ENTITY section.

Usage Rules:

-The names must be ENTITY names.

-A GROUP may IDENTIFY several different ENTITIES.

-If an ENTITY is identified by a GROUP, then the ELEMENTS which make up the GROUP taken together form the identifier.

Synonyms:

IDS

Examples:

- IDENTIFIES ENTITY-743;
- IDENTIFIES ENTITY-78954, ENTITY-8;
- IDS ENT-3;

KEYWORDS statement GROUP section

Purpose:
To selectively retrieve information from the URA data-base. A collection of information may be marked with a unique identifier (KEY) and later retrieved.

Syntax:

KEYWORDS ARE keyword-name(s) ;

Complementary Statements:
APPLIES statement in DEFINE section for a keyword.

Usage Rules:

-A section may have several KEYWORDS

Synonyms:

KEY KEYWORD

Examples:

- KEYWORD IS PAYROLL;

- KEY IS CON-C1;

- KEYWORDS ARE EMP, EMPL, EMPLOYEE;

RESPONSIBLE-PROBLEM-DEFINER statement GROUP section

Purpose:

To associate the PROBLEM-DEFINER with those sections for which he is RESPONSIBLE.

Syntax:

```
RESPONSIBLE-PROBLEM-DEFINER IS problem-definer-name ;
```

Complementary Statements:

RESPONSIBLE FOR statement in PROBLEM-DEFINER section.

Usage Rules:

- Only one PROBLEM-DEFINER may be RESPONSIBLE for any section, hence, this statement may only be used once per section.

Synonyms:

RPD

Examples:

- RESPONSIBLE-PROBLEM-DEFINER IS AL-DICKEY;
- RPD A-HERSHEY;

SECURITY statement GROUP section

Purpose:

To associate SECURITY keys with a section which may be used to limit access to the information given in this section. Note: The SECURITY given refers to the Problem Statement information , not the information in the target system.

Syntax:

SECURITY IS security-name(s) ;

Complementary Statements:

APPLIES statement in a DEFINE section for a SECURITY.

Usage Rules:

- A name may have several SECURITIES.

Synonyms:

SEC SECURITIES

Examples:

- SECURITY IS PROJECT-MANAGER;
- SECURITIES ARE D-ORMISTON, S-BENNEL;
- SEC L-HANNON;

SEE-MEMO statement GROUP section

Purpose:

To indicate that information related to this section, and possibly other sections, is contained within the documentation. The information is contained in the MEMO(S) designated herein.

Syntax:

SEE-MEMO memo-name(s) ;

Complementary Statements:

APPLIES statement in a MEMO section.

Usage Rules:

- A section may have several such statements.

Synonyms:

SM SEE-MEMOS

Examples:

- SEE-MEMO BW-05-03-75-01;
- SEE-MEMOS: PROJ-MGR-106, PROJ-MGR-109;
- SM EPB-37, EPB-38;

SOURCE statement GROUP section

Purpose:
To identify information not contained within the system documentation that is relevant to the understanding of the system. The SOURCE may be a person, a document (such as a practice or guideline), etc.

Syntax:

```
SOURCE IS source-name(s) ;
```

Complementary Statements:
APPLIES statement in DEFINE section for SOURCE name.

Usage Rules:

- A name may have several SOURCES.

Synonyms:

SRC SOURCES

Examples:

- SOURCE IS ENG-LETTER-1-MAY-1973;
- SOURCE: SDP-3-0;

SUBSETTING-CRITERION statement GROUP section

Purpose:
To indicate that this GROUP is used to extract information from a SET to produce a SUBSET.

Syntax:

```
    SUBSETTING-CRITERION FOR set-name(s) ;
```

Complementary Statements:
SUBSETTING-CRITERIA statement in SET section.

Usage Rules:

-The names must be SET names.

-A GROUP may be a SUBSETTING-CRITERION for more than one SET.

-If a GROUP is a SUBSETTING-CRITERION then the ELEMENTS which make up the GROUP taken together form the SUBSETTING-CRITERION for that SET.

Synonyms:

SSCN

Examples:

```
- SUBSETTING-CRITERION FOR MS-GROUP-BANKS, MS-GROUP-CKTS;

- SSCN: MS-GROUP-107, MS-GROUP-108;
```

SYNONYMS statement GROUP section

Purpose:
To give SYNONYMS for the name of the section. Can be used to define short forms for section-names in the documentation. Also can be used to resolve name conflicts within the system. Thus it is useful for reducing the manual effort of documentation.

Syntax:

```
SYNONYMS ARE synonym-name(s) ;
```

Complementary Statements:
DESIGNATE section.

Usage Rules:

- A name may have several SYNONYMS.

Synonyms:

SYN	SYNONYM

Examples:

```
- SYNONYMS ARE G-11, GROUP-11;
- SYNONYM IS GROUP-11;
- SYN ALPHA;
```

TRACE-KEY statement GROUP section

Purpose:
To associate a list of trace-keys with a name so that correspondences between objects in different data bases may be made.

Syntax:

```
TRACE-KEY trace-key-name(s) ;
```

Complementary Statements:
APPLIES statement in DEFINE section for TRACE-KEY name.

Usage Rules:
- The names in the name list must be trace-key names.

Synonyms:

TKEY

Examples:

- TRACE-KEY module-a;

- TKEY part-1, part-2;

UPDATED statement GROUP section

Purpose:
To indicate those PROCESSES which update this GROUP, and optionally, to specify the data used to do the updating.

Syntax:

```
                                    [          group-          ]
                                    [          entity-         ]
     UPDATED BY  process-name(s)    [ USING  element-  name(s) ] ;
                                    [          input-          ]
                                    [          set-            ]
```

Complementary Statements:
UPDATES or USES statement in PROCESS section and USED BY statement in INPUT, SET, ENTITY, GROUP or ELEMENT sections.

Usage Rules:
-A GROUP may be UPDATED by more than one PROCESS.

Synonyms:

UPDD USG

Examples:

- UPDATED BY P-101;

- UPDD P-103, OUTPUT-P-675354 USING FILE-A;

USED statement GROUP section

Purpose:
To indicate the PROCESS(ES) that USE(D) this GROUP, and optionally, DERIVE(S) OUTPUTS or UPDATE(S) SETS, ENTITIES, GROUPS,

Syntax:

```
                                        [                        set-      ]
                                        [    { DERIVE }  *output-          ]
USED BY process-name(s)  [  TO  {        }    entity-    name(s) ] ;
                                        [    { UPDATE }    group-          ]
                                        [                    element-      ]
```

* Output-name(s) may only be used with the DERIVE clause.

Complementary Statements:
USES, UPDATES or DERIVES statement in a PROCESS section and DERIVED or UPDATED statement in SET, ENTITY, GROUP or ELEMENT sections.

Usage Rules:
-Several PROCESSES may use the GROUP.

Synonyms:

DRV UPD

Examples:

- USED BY PROCESS-A;

- USED BY LINEAR-PROCESS, INTEGER-PROCESS TO UPDATE GR-4;

4.8 INPUT section header statement

Purpose:

To allow a detailed description of an INPUT. An INPUT is used to describe a collection of information produced external to the target system but used by the target system. An INPUT shows the flow of data from the outside world into the system. Hence, it crosses the system boundary. The INPUT section is also used to uniquely identify each system input.

Syntax:

```
INPUT input-name(s) ;
```

Usage Rules:

-Must be the first statement in a INPUT section.

-Several INPUTS may be defined at a time.

Synonyms:

INP

Examples:

- INPUT PAYROLL-CODE;

- INPUT CODE ;

- INP DATA-FOR-COMMUNICATION;

ASSERT statement INPUT section

Purpose:
To associate assertions about the attributes of names with other names for the purposes of consistency checking.

Syntax:

```
ASSERT name attribute-name attribute-value
            [, name attribute-name attribute-value] ...;
```

Complementary Statements:
None.

Usage Rules:
- Name may be any type of name.

Synonyms:

ASRT

Examples:

```
- ASSERT data-name-1 type character;

- ASRT sine-function arguments 1,
       coord-function arguments 2;
```

ATTRIBUTES statement INPUT section

Purpose:
To specify properties or characteristics particular to a given section.

Syntax:

```
                                { attv-name } [                  { attv-name } ]
    ATTRIBUTES ARE attr-name    {           } [ ,attr-name       {           } ]..
                                {  integer  } [                  {  integer  } ]
```

Complementary Statements:
none.

Usage Rules:

- A name may have several ATTRIBUTES

Synonyms:

ATTR ATTRIBUTE

Examples:

- ATTRIBUTES ARE FORMAT NUMERIC, LENGTH 6;
- ATTRIBUTES ARE FREQUENCY 100, VOLUME 10;
- ATTR CHAR ZZZ9V9;

CAUSES statement INPUT section

Purpose:
To specify an EVENT/EVENTS which are caused by this INPUT.

Syntax:

CAUSES event-name(s) ;

Complementary Statements:
CAUSED statement in the EVENT section.

Usage Rules:
- An INPUT may CAUSE several EVENTS.

Synonyms:

CSS

Examples:

- CAUSES START-PROC-A;

- CSS SUBPROCESS-COMPLETION, MAIN-PROCESS-BEGINS ;

CLASSIFICATION statement INPUT section

Purpose:
To associate security CLASSIFICATION requirements with data in the target system.

Syntax:

```
CLASSIFICATION classification-name [ integer ]

                 [, classification-name [ integer ]]...  ;
```

Complementary Statements:
None.

Usage Rules:
- The name must be a CLASSIFICATION name.

Synonyms:

CLS   CLASSIFICATIONS

Examples:

- CLASSIFICATION IS PERSONNEL, SEC-LEVEL 3;

- CLS RING-LEVEL 2, UPDATE;

CONSISTS statement INPUT section

Purpose:

To describe the combination of GROUPS, and/or ELEMENTS which make up this INPUT. This implies that each instance of the INPUT will contain values of the GROUP and ELEMENT names. A GROUP or ELEMENT may be repeated the number of times denoted by the SYSTEM-PARAMETER.

Syntax:

```
                                      element-
CONSISTS OF [ system-parameter ]   group-name

                                              element-
            [ , [ system-parameter ]   group-name ] ...   ;
```

Complementary Statements:

CONTAINED statement in a GROUP or ELEMENT section.

Usage Rules:

-The names, other than the system-parameters, must be GROUP or ELEMENT names.

-An INPUT can contain several GROUPS or ELEMENTS.

Synonyms:

CSTS

Examples:

- CONSISTS OF TWO DATA-GROUP-1;

- CONSISTS: DATA-GROUP-1, ELEMENT-A;

- CSTS OF SPAN-ELEMENT-A;

- CSTS: GROUP-NO-1, GROUP-NO-2;

CONTAINED statement INPUT section

Purpose:
To give the SETS that contain this INPUT. An INPUT being contained in a SET means that the data values contained in the INPUT will be included in the logical SET.

Syntax:

CONTAINED IN set-name(s) ;

Complementary Statements:
CONSISTS statement in an SET section.

Usage Rules:
- The names must be SET names.

- Several SETS may contain a given INPUT.

Synonyms:

CNTD

Examples:

- CONTAINED IN MASTER-FILE;

- CNTD: HS-1,HS-2;

- CNTD FILE-1;

DESCRIPTION statement INPUT section

Purpose:
To give a text DESCRIPTION of the section being described, and to state any information which cannot be easily or accurately stated with the syntax applicable for a given section.

Syntax:

```
DESCRIPTION ;
        comment-entry ;
```

Complementary Statements:
None.

Usage Rules:
- See chapter 2, section 10, for the rules concerning comment entries.

Synonyms:

DESC

Examples:

```
DESCRIPTION;
   THIS ALLOWS YOU TO DESCRIBE IN NARRATIVE FORM WHAT YOU EXPECT
THIS SECTION TO DO;

DESC;
   ANY RELEVANT INFORMATION GOES HERE;
```

GENERATED statement INPUT section

Purpose:
To identify the INTERFACE which produces this INPUT for the system.

Syntax:

GENERATED BY interface-name(s) ;

Complementary Statements:
GENERATES statement in INTERFACE section.

Usage Rules:
-The names must be INTERFACE names.

Synonyms:

GEND

Examples:

- GENERATED BY INPUT-INTERFACE-1;

- GEND BY INTERFACE-456;

HAPPENS statement INPUT section

Purpose:
To give the volume of this INPUT. More than one instance of an INPUT may occur over some period of time. The number of instances of the INPUT which occur in a time INTERVAL is expressed with this statement.

Syntax:

HAPPENS system-parameter TIMES-PER interval-name ;

Complementary Statements:
None.

Usage Rules:
- The name must be an INTERVAL name.

- The statement may be given as many times as necessary with different INTERVAL names.

Synonyms:

HAP TIMP

Examples:

- HAPPENS FORTY-SEVEN TIMES-PER INTERVAL-A;

- HAP THIRTY-TWO TIMP INT-B;

INTERRUPTS statement INPUT section

Purpose:
To specify those PROCESS(ES) which are interrupted by the arrival of this INPUT.

Syntax:

INTERRUPTS process-name(s);

Complementary Statements:
INTERRUPTED statement in the PROCESS section.

Usage Rules:

- An INPUT may INTERRUPT several PROCESSES.

Synonyms:

INTS

Examples:

- INTERRUPTS PAYCHECK-PROCESSING;

- INTS LOADING-PROC-A, LOADING-PROC-B, LOADING-PROC-C;

KEYWORDS statement INPUT section

Purpose:
To selectively retrieve information from the URA data-base. A ccllection of information may be marked with a unique identifier (KEY) and later retrieved.

Syntax:

KEYWORDS ARE keyword-name(s) ;

Complementary Statements:
APPLIES statement in DEFINE section for a keyword.

Usage Rules:

- A section may have several KEYWORDS.

Synonyms:

KEY	KEYWORD

Examples:

- KEYWORD IS PAYROLL;
- KEY IS CON-C1;
- KEYWORDS ARE EMP, EMPL, EMPLOYEE;

MAKES statement INPUT section

Purpose:
To give those CONDITION(S) which are set when this INPUT arrives.

Syntax:

```
                               { TRUE  }
MAKES condition-name(s)        {       }  ;
                               { FALSE }
```

Complementary Statements:
MADE statement in the CONDITION section.

Usage Rules:

- An INPUT may make several CONDITIONS become TRUE or FALSE.

- An INPUT cannot MAKE some CONDITION(S) TRUE and some CONDITION(S) FALSE in a single statement. Separate statements are required.

Synonyms:

MAK

Examples:

- MAKES END-OF-FILE-REACHED, INPUT-PROC-COMPLETION TRUE ;

- MAK SYSTEM-READY FALSE;

- MAK FATAL-ERROR, PROGRAM-INTERRUPT T;

Purpose:

To show the structural relationship of this INPUT to a higher-level INPUT. This statement can be used to express a top-down or bottom-up view of the system.

Syntax:

PART OF input-name ;

Complementary Statements:

SUBPARTS statement in an INPUT section.

Usage Rules:

- The name must be an INPUT name.
- Only one INPUT name may be given, hence, only a tree structure can be established.

Synonyms:

none.

Examples:

- PART OF IN-101;
- PART INPUT-35;

RECEIVED statement INPUT section

Purpose:
To show which PROCESS uses or receives the INPUT.

Syntax:

RECEIVED BY process-name(s) ;

Complementary Statements:
RECEIVES statement in PROCESS section.

Usage Rules:

- The names must be PROCESS names.

- An INPUT may be received by more than one PROCESS.

Synonyms:

RCVD

Examples:

- RECEIVED BY P-104;

- RCVD P-89;

RESPONSIBLE-PROBLEM-DEFINER statement INPUT section

Purpose:

To associate the PROBLEM-DEFINER with those sections for which he is RESPONSIBLE.

Syntax:

<u>RESPONSIBLE-PROBLEM-DEFINER</u> IS problem-definer-name ;

Complementary Statements:

RESPONSIBLE FOR statement in PROBLEM-DEFINER section.

Usage Rules:

- It may be used in any section except the PROBLEM-DEFINER section.

- Only one PROBLEM-DEFINER may be RESPONSIBLE for any section, hence, this statement may only be used once per section.

Synonyms:

RPD

Examples:

- RESPONSIBLE-PROBLEM-DEFINER IS AL-DICKEY;

- RPD A-HERSHEY;

SECURITY statement INPUT section

Purpose:

To associate SECURITY keys with a section which may be used to limit access to the information given in this section. Note: The SECURITY given refers to the Problem Statement information , not the information in the target system.

Syntax:

SECURITY IS security-name(s) ;

Complementary Statements:

APPLIES statement in a DEFINE section for a SECURITY.

Usage Rules:

- A name may have several SECURITIES.

Synonyms:

SEC SECURITIES

Examples:

- SECURITY IS PROJECT-MANAGER;
- SECURITIES ARE D-ORMISTON, S-MENNEL;
- SEC L-HANNON;

SEE-MEMO statement INPUT section

Purpose:
To indicate that information related to this section, and possibly other sections, is contained within the documentation. The information is contained in the MEMO(S) designated herein.

Syntax:

```
SEE-MEMO memo-name(s) ;
```

Complementary Statements:
APPLIES statement in a MEMO section.

Usage Rules:

- A section may have several such statements.

Synonyms:

SM SEE-MEMOS

Examples:

- SEE-MEMO BW-05-03-75-01;
- SEE-MEMOS: PROJ-MGR-106, PROJ-MGR-109;
- SM ERB-37, ERB-38;

SOURCE statement INPUT section

Purpose:

To identify information not contained within the system documentation that is relevant to the understanding of the system. The SOURCE may be a person, a document (such as a practice or guideline), etc.

Syntax:

<u>SOURCE</u> IS source-name(s) ;

Complementary Statements:

APPLIES statement in DEFINE section for SOURCE name.

Usage Rules:

- It may be used in any section except a DEFINE section for a SOURCE.
- A name may have several SOURCES.

Synonyms:

SRC	SOURCES

Examples:

- SOURCE IS ENG-LETTER-1-MAY-1973;
- SOURCE: SDP-3-0;

AD-A055 505 MICHIGAN UNIV ANN ARBOR DEPT OF INDUSTRIAL AND OPERA--ETC F/G 9/2
USER REQUIREMENTS LANGUAGE (URL) USER'S MANUAL. PART II. (REFER--ETC(U)
MAR 77 F19628-76-C-0197
UNCLASSIFIED ESD-TR-78-127-VOL-2 NL

3 OF 5
ADA
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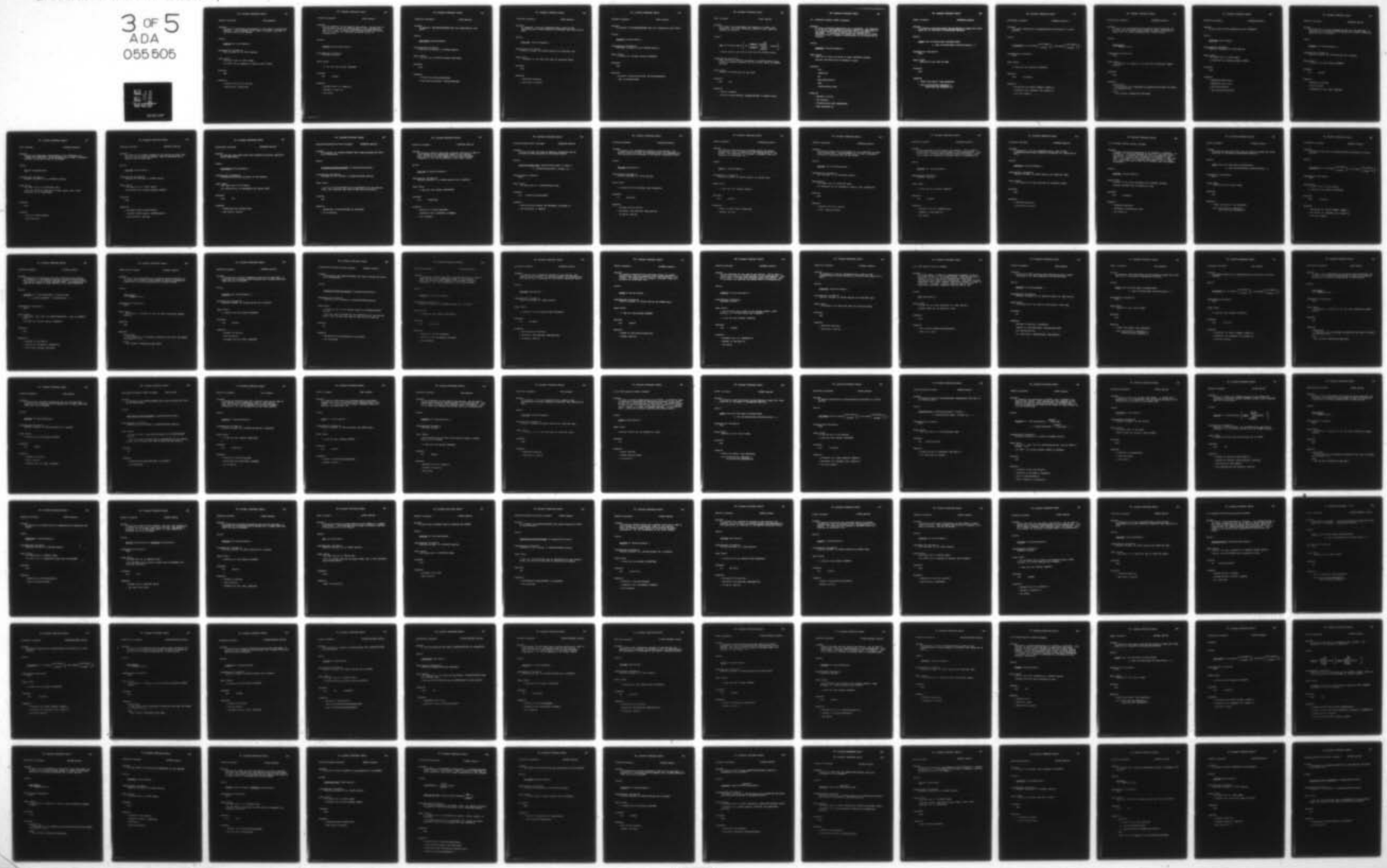

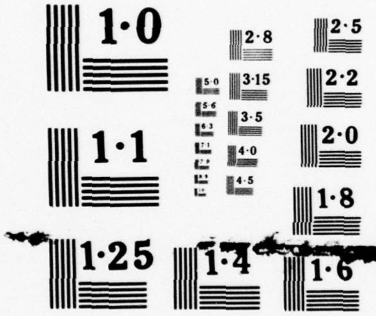
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2·8
2·5
5·0
3·15
2·2
5·6
6·3
3·5
2·0
1·1
4·0
4·5
1·8
1·25
1·4
1·6

Purpose:

To show the structural relationship of this INPUT to lower-level INPUT(S). This statement can be used to express a top-down or bottom-up view of the system.

Syntax:

SUBPARTS ARE input-name(s) ;

Complementary Statements:

PART statement in an INPUT section.

Usage Rules:

- The names must be INPUT names.
- An INPUT may be composed of several other INPUTS.

Synonyms:

SUBP

Examples:

- SUBPARTS ARE IN-101, IN-103;
- SUBP IN-309, INPUT-6785;

SYNONYMS statement INPUT section

Purpose:

To give SYNONYMS for the name of the section. Can be used to defined short forms for section-names in the documentation. Also can be used to resolve name conflicts within the system. Thus it is useful for reducing the manual effort of documentation.

Syntax:

SYNONYMS ARE synonym-name(s) ;

Complementary Statements:

DESIGNATE section.

Usage Rules:

- A name may have several SYNONYMS.

Synonyms:

SYN SYNONYM

Examples:

- SYNONYMS ARE I-11, INPUT-11;
- SYNONYM IS INPUT-11;
- SYN ALPHA;

TERMINATES statement INPUT section

Purpose:
To specify a PROCESS/PROCESSES that are terminated by this INPUT.

Syntax:

TERMINATES process-name(s);

Complementary Statements:
TERMINATED statement in PROCESS section.

Usage Rules:
- An INPUT may TERMINATE several PROCESSES.

Synonyms:

TRMS

Examples:

- TERMINATES PAYROLL-PROCESSING;

- TRMS PRINTING-PROCESS, PACKING-PROCESS;

TRACE-KEY statement INPUT section

Purpose:

To associate a list of trace-keys with a name so that correspondences between objects in different data bases may be made.

Syntax:

```
TRACE-KEY trace-key-name(s) ;
```

Complementary Statements:

APPLIES statement in DEFINE section for TRACE-KEY name.

Usage Rules:

- The names in the name list must be trace-key names.

Synonyms:

TKEY

Examples:

- TRACE-KEY module-a;
- TKEY part-1, part-2;

Purpose:

To specify a PROCESS/PROCESSES that are triggered by this INPUT.

Syntax:

```
    TRIGGERS process-name(s) ;
```

Complementary Statements:

TRIGGERED statement in the PROCESS section.

Usage Rules:

- An INPUT may TRIGGER several PROCESSES.

Synonyms:

TRGS

Examples:

- TRIGGERS MISSILE-CORRECTION, EVASIVE-MANEUVERS;
- TRGS MAIN-PROCESSING;

USED statement INPUT section

Purpose:
To indicate the PROCESS(ES) that USE(D) this INPUT, and optionally, DERIVE(S) OUTPUTS or UPDATE(S) SETS, ENTITIES, GROUPS, or ELEMENTS.

Syntax:

```
                        [                        set-           ]
                        [      { DERIVE }  *output-             ]
USED BY process-name(s) [  TO  {        }   entity-    name(s)  ] ;
                        [      { UPDATE }   group-              ]
                        [                   element-            ]
```

* Output-name(s) may only be used with the DERIVE clause.

Complementary Statements:
USES, UPDATES or DERIVES statement in a PROCESS section and DERIVED or UPDATED statement in SET, ENTITY, GROUP or ELEMENT sections.

Usage Rules:
- Several PROCESSES may use the INPUT.

Synonyms:

DEV UPD

Examples:

- USED BY PROCESS;

- USED BY LINEAR-PROCESS, INTEGER-PROCESS TO DERIVE ALPHA;

4.9 INTERFACE section header statement

Purpose:

To allow a detailed description of an INTERFACE. The INTERFACE is an object, organization or system outside the boundaries of the target system that interacts with the system being described. It identifies the origin and destination of system products so that a complete understanding of the system may be obtained.

Syntax:

<u>INTERFACE</u> interface-name(s) ;

Usage Rules:

-Must be the first statement of every INTERFACE section.

-Several INTERFACES may be defined at once.

Synonyms:

INTF

INTERFACES

RWE

REAL-WORLD-ENTITY

ORGU

ORGANIZATIONAL-UNIT

Examples:

- INTERFACE RWE-22;

- RWE PAYROLL;

- ORGANIZATIONAL-UNIT STENO-POOL;

- ORGU WAREHOUSE-4;

Purpose:

To associate assertions about the attributes of names with other names for the purposes of consistency checking.

Syntax:

```
ASSERT name attribute-name attribute-value
                 [, name attribute-name attribute-value] ...;
```

Complementary Statements:

None.

Usage Rules:

- Name may be any type of name.

Synonyms:

ASRT

Examples:

```
- ASSERT data-name-1 type character;

- ASRT sine-function arguments 1,
       coord-function arguments 2;
```

ATTPIBUTES statement INTERFACE section

Purpose:
To specifv properties or characteristics particular to a given section.

Svntax:

```
                            { attv-name } [                  { attv-name } ]
ATTRIBUTES APE attr-name    {           } [ ,attr-name       {           } ] ;
                            {  integer  } [                  {  integer  } ]
```

Complementarv Statements:
none.

Usaqe Pules:

-A name may have several ATTRIBUTES

Synonyms:

ATTR ATTPIBUTE

Fxamples:

- ATTRIBUTES ARE FORMAT NUMERIC, LENGTH 6;
- ATTRIBUTES ARE FREQUENCY 100, VOLUME 10;
- ATTR CHAR ZZZ9V9;

DESCPIPTION statement INTERPACE section

Purpose:

To give a text DESCPIPTION of the section being described, and to state any information which cannot be easily or accurately stated with the syntax applicable for a given section.

Syntax:

```
     DESCRIPTION ;
            comment-entry ;
```

Complementary Statements:

Ncne.

Usage Pules:

- See chapter 2, section 10, for the rules concerning comment entries.

Synonyms:

DFSC

Fxamples:

```
     DESCRIPTION;
        THIS ALLOWS YOU TO DESCRIBE IN NARPATIVE FORM WHAT YOU EXPECT
     THIS SFCTION TO DO;
     DFSC;
        ANY RELEVANT INFORMATION GOES HEPE;
```

GENERATES statement INTERFACE section

Purpose:
To give those INPUTS generated by this INTERFACE.

Syntax:

GENERATES input-name(s) ;

Complementary Statements:
GENERATED statement in INPUT section.

Usage Rules:

-The names must be INPUT names.

-A INTERFACE may generate several INPUTS.

Synonyms:

GENS

Examples:

- GENERATES SYSTEM-IN-1;

- GENERATES IN-A, IN-B;

- GENS SYSTEM-INPUT;

- GENS SYS-A-IN,SYS-B-IN;

KEYWORDS statement INTERFACE section

Purpose:
To selectively retrieve information from the URA data-base. A collection of information may be marked with a unique identifier (KEY) and later retrieved.

Syntax:

KEYWORDS ARE keyword-name(s) ;

Complementary Statements:
APPLIES statement in DEFINE section for a keyword.

Usage Rules:
-A section may have several KEYWORDS

Synonyms:

key keyword

Examples:

- keyword is payroll;

- key is con-c1;

- keywords are emp, empl, employee;

PART statement INTERFACE section

Purpose:

To show the structural relationship of this INTERFACE to a higher-level INTERFACE. This statement can be used to express a top-down or bottom-up view of the system.

Syntax:

PART OF interface-name ;

Complementary Statements:

SUBPARTS statement in an INTERFACE section.

Usage Rules:

-The name must be an INTERFACE name.

-Only one INTERFACE name can be given, hence, only a tree structure may be established.

Synonyms:

none.

Examples:

- PART OF PAYROLL-SYSTEM;

- PART DEPT-601;

RECEIVES statement INTERFACE section

Purpose:

To identify the OUTPUTS produced by the system and show where they are used outside the system. This is necessary for a complete system definition.

Syntax:

RECEIVES output-name(s) ;

Complementary Statements:

RECEIVED BY statement in OUTPUT section.

Usage Rules:

- The names must be OUTPUT names.
- An INTERFACE may receive several OUTPUTS.

Synonyms:

RCVS

Examples:

- RECEIVES FORECAST-FILE-OUTPUT;
- RECEIVES OUTPUT-FILE-A, OUTPUT-FILE-B;
- RCVS OUT-1001, OUT-103;

RESPONSIBLE statement INTERFACE section

Purpose:
To identify those SETS which this INTERFACE controls, maintains, and/or administers.

Syntax:

RESPONSIBLE FOR set-name(s) ;

Complementary Statements:
RESPONSIBLE-INTERFACE statement in SET section.

Usage Rules:

- The names must be SET names.

- An INTERFACE may be RESPONSIBLE for several SETS.

Synonyms:

RESP RES

Examples:

- RESPONSIBLE FOR PAYROLL-FILE;

- RESP FILE-A, FILE-B;

RESPONSIBLE-PROBLEM-DEFINER statement INTERFACE section

Purpose:

To associate the PROBLEM-DEFINER with those sections for which he is RESPONSIBLE.

Syntax:

RESPONSIBLE-PROBLEM-DEFINER IS problem-definer-name ;

Complementary Statements:

RESPONSIBLE FOR statement in PROBLEM-DEFINER section.

Usage Rules:

- Only one PROBLEM-DEFINER may be RESPONSIBLE for any section, hence, this statement may only be used once per section.

Synonyms:

RPD

Examples:

- RESPONSIBLE-PROBLEM-DEFINER IS AL-DICKEY;
- RPD A-HERSHEY;

SECURITY statement INTERFACE section

Purpose:

To associate SECURITY keys with a section which may be used to limit access to the information given in this section. Note: The SECURITY given refers to the Problem Statement information , not the information in the target system.

Syntax:

SECURITY IS security-name(s) ;

Complementary Statements:

APPLIES statement in a DEFINE section for a SECURITY.

Usage Rules:

- A name may have several SECURITIES.

Synonyms:

SEC SECURITIES

Examples:

- SECURITY IS PROJECT-MANAGER;

- SECURITIES ARE D-ORMISTON, S-HENNEL;

- SEC L-HANNON;

SECURITY-ACCESS-RIGHT statement INTERFACE section

Purpose:
To give the type and level of security associated with an INTERFACE during operation of the target system.

Syntax:

```
SECURITY-ACCESS-RIGHT classification-name [ integer ]

                 [, classification-name [ integer ]]...  ;
```

Complementary Statements:
None.

Usage Rules:
- The name must be a CLASSIFICATION name.

Synonyms:

SAR SECURITY-ACCESS-RIGHTS

Examples:

- SECURITY-ACCESS-RIGHTS ARE PERSONNEL, SEC-LEVEL 3;
- SAR RING-LEVEL 2, UPDATE;

SEE-MEMO statement — INTERFACE section

Purpose:

To indicate that information related to this section, and possibly other sections, is contained within the documentation. The information is contained in the MEMO(S) designated herein.

Syntax:

SEE-MEMO memo-name(s) ;

Complementary Statements:

APPLIES statement in a MEMO section.

Usage Rules:

- A section may have several such statements.

Synonyms:

SM	SEE-MEMOS

Examples:

- SEE-MEMO BW-05-03-75-01;
- SEE-MEMOS: PROJ-MGR-106, PROJ-MGR-109;
- SM EPB-37, EPB-38;

SOURCE statement INTERFACE section

Purpose:

To identify information not contained within the system documentation that is relevant to the understanding of the system. The SOURCE may be a person, a document (such as a practice or guideline), etc.

Syntax:

SOURCE IS source-name(s) ;

Complementary Statements:

APPLIES statement in DEFINE section for SOURCE name.

Usage Rules:

- A name may have several SOURCES.

Synonyms:

SRC SOURCES

Examples:

- SOURCE IS ENG-LETTER-1-MAY-1973;
- SOURCE: SDP-3-0;

SURPAFTS statement INTERFACE section

Purpose:
To show the structural relationship of this INTERFACE to lower-level INTERFACE(S). This statement can be used to express a tcp-down or bottom-up view of the system.

Syntax:

<u>SUBPARTS</u> ARE interface-name(s) ;

Complementary Statements:
PAFT statement in an INTERFACE section.

Usage Pules:
- The names must be INTERFACE names.

- An INTERFACE may be composed of several other INTERFACES.

Synonyms:

SUPP

Fxamples:

- SURPAFTS ARE RWF-1, RWF-2;

- SUBP : PAYROLL-SYSTEM;

SYNONYMS statement INTERFACE section

Purpose:
To give SYNONYMS for the name of the section. Can be used to define short forms for section-names in the documentation. Also can be used to resolve name conflicts within the system. Thus it is useful for reducing the manual effort of documentation.

Syntax:

SYNONYMS ARE synonym-name(s) ;

Complementary Statements:
DESIGNATE section.

Usage Rules:

- A name may have several SYNONYMS.

Synonyms:

SYN SYNONYM

Examples:

- SYNONYMS ARE I-11, INTERFACE-11;

- SYNONYM IS INTERFACE-11;

- SYN ALPHA;

Purpose:

To associate a list of trace-keys with a name so that correspondences between objects in different data bases may be made.

Syntax:

```
TRACE-KEY trace-key-name(s) ;
```

Complementary Statements:

APPLIES statement in DEFINE section for TRACE-KEY name.

Usage Rules:

- The names in the name list must be trace-key names.

Synonyms:

TKEY

Examples:

- TRACE-KEY module-a;

- TKEY part-1, part-2;

4.10 INTERVAL section header statement

Purpose:

To allow a detailed description of an INTERVAL or INTERVALS. An INTERVAL is a specific duration of time or a time unit within the system. In defining frequency of an occurrence in the system, the frequency must be defined with respect to some time unit. For example, the designer might specify that a fiscal year lasted from June to May, and a calender year from January to December.

Syntax:

```
INTERVAL interval-name(s) ;
```

Usage Rules:

- It must be the first statement in an INTERVAL section.
- Several INTERVALS may be defined at once.

Synonyms:

INT INTERVALS

Examples:

```
- INTERVAL WORK-WEEK;

- INTERVALS: BUSINESS-DAY, DAY;

- INT PERIOD-1;
```

ASSERT statement INTERVAL section

Purpose:
To associate assertions about the attributes of names with other names for the purposes of consistency checking.

Syntax:

```
ASSERT name attribute-name attribute-value

                    [, name attribute-name attribute-value] ...;
```

Complementary Statements:
None.

Usage Rules:
- Name may be any type of name.

Synonyms:

ASRT

Examples:

```
- ASSERT data-name-1 type character;

- ASRT sine-function arguments 1,
       coord-function arguments 2;
```

ATTRIBUTES statement INTERVAL section

Purpose:
To specify properties or characteristics particular to a given section.

Syntax:

```
                              { attv-name } [               { attv-name } ]
     ATTRIBUTES ARE attr-name {           } [ ,attr-name    {           } ] ...
                              {  integer  } [               {  integer  } ]
```

Complementary Statements:
none.

Usage Rules:

-It may be used in any section.

-A name may have several ATTRIBUTES

Synonyms:

ATTR ATTRIBUTE

Examples:

- ATTRIBUTES ARE FORMAT NUMERIC, LENGTH 6;
- ATTRIBUTES ARE FREQUENCY 100, VOLUME 10;
- ATTR CHAR ZZZ9V9;

CONSISTS statement INTERVAL section

Purpose:

To describe the combination of other INTERVALS which make up this INTERVAL. This implies that each instance of the INTERVAL will contain values of other INTERVAL names. An INTERVAL may be repeated the number of times denoted by the SYSTEM-PARAMETER.

Syntax:

```
CONSISTS OF [ system-parameter ] interval-name

     [ , [ system-parameter ] interval-name ] ...   ;
```

Complementary Statements:

None.

Usage Rules:

- The names, other than the SYSTEM-PARAMETERS , must be INTERVAL names.
- An INPUT may contain several INTERVALS.

Synonyms:

CSTS

Examples:

- CONSISTS OF INTERVAL-A;
- CONSISTS OF INTERVAL-1, INTERVAL-2;
- CSTS: SIXTY SECONDS, ONE HOUR;

Purpose:

To give a text DESCRIPTION of the section being described, and to state any information which cannot be easily or accurately stated with the syntax applicable for a given section.

Syntax:

```
DESCRIPTION ;
      comment-entry ;
```

Complementary Statements:

None.

Usage Rules:

- See chapter 2, section 10, for the rules concerning comment entries.

Synonyms:

DESC

Examples:

```
DESCRIPTION;
   THIS ALLOWS YOU TO DESCRIBE IN NARRATIVE FORM WHAT YOU EXPECT
   THIS SECTION TO DO;

DESC;
   ANY RELEVANT INFORMATION GOES HERE;
```

KEYWORDS statement INTERVAL section

Purpose:
To selectively retrieve information from the URA data-base. A cellection of information may be marked with a unique identifier (KEY) and later retrieved.

Syntax:

<u>KEYWORDS</u> ARE keyword-name(s) ;

Complementary Statements:
APPLIES statement in DEFINE section for a keyword.

Usage Rules:

-A section may have several KEYWORDS

Synonyms:

KEY KEYWORD

Examples:

- KEYWORD IS PAYROLL;

- KEY IS CON-C1;

- KEYWORDS ARE EMP, EMPL, EMPLOYEE;

RESPONSIBLE-PROBLEM-DEFINER statement INTERVAL section

Purpose:
To associate the PROBLEM-DEFINER with those sections for which he is RESPONSIBLE.

Syntax:

RESPONSIBLE-PROBLEM-DEFINER IS problem-definer-name ;

Complementary Statements:
RESPONSIBLE FOR statement in PROBLEM-DEFINER section.

Usage Rules:

- It may be used in any section except the PROBLEM-DEFINER section.

- Only one PROBLEM-DEFINER may be RESPONSIBLE for any section, hence, this statement may only be used once per section.

Synonyms:

RPD

Examples:

- RESPONSIBLE-PROBLEM-DEFINER IS AL-DICKEY;

- RPD A-HERSHEY;

SECURITY statement — INTERVAL section

Purpose:

To associate SECURITY keys with a section which may be used to limit access to the information given in this section. Note: The SECURITY given refers to the Problem Statement information , not the information in the target system.

Syntax:

```
SECURITY IS security-name(s) ;
```

Complementary Statements:

APPLIES statement in a DEFINE section for a SECURITY.

Usage Rules:

- A name may have several SECURITIES.

Synonyms:

SEC SECURITIES

Examples:

- SECURITY IS PROJECT-MANAGER;
- SECURITIES ARE D-ORMISTON, S-MENNEL;
- SEC L-HANNON;

SEE-MEMO statement INTERVAL section

Purpose:

To indicate that information related to this section, and possibly other sections, is contained within the documentation. The information is contained in the MEMO(S) designated herein.

Syntax:

```
SEE-MEMO memo-name(s) ;
```

Complementary Statements:

APPLIES statement in a MEMO section.

Usage Rules:

- A section may have several such statements.

Synonyms:

SM	SEE-MEMOS

Examples:

- SEE-MEMO BW-05-03-75-01;
- SEE-MEMOS: PROJ-MGR-106, PROJ-MGR-109;
- SM EPB-37, EPB-38;

SOURCE statement INTERVAL section

Purpose:
To identify information not contained within the system documentation that is relevant to the understanding of the system. The SOURCE may be a person, a document (such as a practice or guideline), etc.

Syntax:

```
SOURCE IS source-name(s) ;
```

Complementary Statements:
APPLIES statement in DEFINE section for SOURCE name.

Usage Rules:

- A name may have several SOURCES.

Synonyms:

SRC SOURCES

Examples:

- SOURCE IS ENG-LETTER-1-MAY-1973;
- SOURCE: SDP-3-0;

SYNONYMS statement INTERVAL section

Purpose:

To give SYNONYMS for the name of the section. Can be used to define short forms for section-names in the documentation. Also can be used to resolve name conflicts within the system. Thus it is useful for reducing the manual effort of documentation.

Syntax:

SYNONYMS ARE synonym-name(s) ;

Complementary Statements:

DESIGNATE section.

Usage Rules:

- The statement may be used in any section except a MEMO section, or a DEFINE section for a SYNONYM.

- A name may have several SYNONYMS.

Synonyms:

SYN SYNONYM

Examples:

- SYNONYMS ARE I-11, INTERVAL-11;

- SYNONYM IS INTERVAL-11;

- SYN ALPHA;

TRACE-KEY statement INTERVAL section

Purpose:

To associate a list of trace-keys with a name so that correspondences between objects in different data bases may be made.

Syntax:

TRACE-KEY trace-key-name(s) ;

Complementary Statements:

APPLIES statement in DEFINE section for TRACE-KEY name.

Usage Rules:

- The names in the name list must be trace-key names.

Synonyms:

TKEY

Examples:

- TRACE-KEY module-a;

- TKEY part-1, part-2;

4.11 MEMO section header statement

Purpose:

To define MEMOS. A MEMO is a description relevent to one or more other objects in the target system. MEMOS can be used to record as part of the system documentation significant information which needs to be highlighted. This might include assumptions made during design, limitations assumed or known to exist (e.g. Hardware. They can also be used to record outstanding problems, requests, effective dates, etc.

Syntax:

```
MEMO memo-name(s) ;
```

Usage Rules:

-It must be the first statement in a MEMO section.

-Several MEMOS may be defined at once.

Synonyms:

none.

Examples:

- MEMO NOTE-ON-UNRESOLVED-PROCESS-63;

- MEMO M-73, M-86;

APPLIES statement MEMO section

Purpose:
To tie this MEMO to one or more sections so that a cross-reference to the MEMO appears in the documentation.

Syntax:

```
APPLIES TO non-memo-name(s) ;
```

Complementary Statements:
SEE-MEMO statement in all sections except the MEMO section.

Usage Rules:
-The names may be any type of name except a MEMO name.

Synonyms:

APP

Examples:

-APPLIES TO PROCESS-1, PROCESS-2;

-APPLIES TO FREQUENCY-BAND, PRICING-UNIT-NAME;

-APP NETWORK-SOURCE;

-APP LINK-IDENT, NETWORK-NOTES, BASE-NETWORK;

Purpose:
To associate assertions about the attributes of names with other names for the purposes of consistency checking.

Syntax:

```
ASSERT name attribute-name attribute-value

                 [, name attribute-name attribute-value] ...;
```

Complementary Statements:
None.

Usage Rules:
- Name may be any type of name.

Synonyms:

ASRT

Examples:

```
- ASSERT data-name-1 type character;

- ASRT sine-function arguments 1,
          coord-function arguments 2;
```

ATTRIBUTES statement MEMO section

Purpose:
To specify properties or characteristics particular to a given section.

Syntax:

```
                                  { attv-name } [              { attv-name } ]
ATTRIBUTES ARE attr-name {           } [ ,attr-name {           } ]..
                                  {  integer  } [              {  integer  } ]
```

Complementary Statements:
none.

Usage Rules:

-A name may have several ATTRIBUTES

Synonyms:

ATTR ATTRIBUTE

Examples:

- ATTRIBUTES ARE FORMAT NUMERIC, LENGTH 6;
- ATTRIBUTES ARE FREQUENCY 100, VOLUME 10;
- ATTR CHAR ZZZ9V9;

DESCRIPTION statement MEMO section

Purpose:

To give a text DESCRIPTION of the section being described, and to state any information which cannot be easily or accurately stated with the syntax applicable for a given section.

Syntax:

```
DESCRIPTION ;
            comment-entry ;
```

Complementary Statements:

None.

Usage Rules:

- See chapter 2, section 10, for the rules concerning comment entries.

Synonyms:

DESC

Examples:

```
DESCRIPTION;
   THIS ALLOWS YOU TO DESCRIBE IN NARRATIVE FORM WHAT YOU EXPECT
THIS SECTION TO DO;

DESC;
   ANY RELEVANT INFORMATION GOES HERE;
```

KEYWORDS statement MEMO section

Purpose:

To selectively retrieve information from the URA data-base. A collection of information may be marked with a unique identifier (KEY) and later retrieved.

Syntax:

KEYWORDS ARE keyword-name(s) ;

Complementary Statements:

APPLIES statement in DEFINE section for a keyword.

Usage Rules:

-A section may have several KEYWORDS

Synonyms:

KEY KEYWORD

Examples:

- KEYWORD IS PAYROLL;

- KEY IS CON-C1;

- KEYWORDS ARE EMP, EMPL, EMPLOYEE;

RESPONSIBLE-PROBLEM-DEFINER statement MEMO section

Purpose:
To associate the PROBLEM-DEFINER with those sections for which he is RESPONSIBLE.

Syntax:

RESPONSIBLE-PROBLEM-DEFINER IS problem-definer-name ;

Complementary Statements:
RESPONSIBLE FOR statement in PROBLEM-DEFINER section.

Usage Rules:

- It may be used in any section except the PROBLEM-DEFINER section.

- Only one PROBLEM-DEFINER may be RESPONSIBLE for any section, hence, this statement may only be used once per section.

Synonyms:

RPD

Examples:

- RESPONSIBLE-PROBLEM-DEFINER IS AL-DICKEY;

- RPD A-HERSHEY;

SECURITY statement MEMO section

Purpose:

To associate SECURITY keys with a section which may be used to limit access to the information given in this section. Note: The SECURITY given refers to the Problem Statement information , not the information in the target system.

Syntax:

SECURITY IS security-name(s) ;

Complementary Statements:

APPLIES statement in a DEFINE section for a SECURITY.

Usage Rules:

- A name may have several SECURITIES.

Synonyms:

SEC SECURITIES

Examples:

- SECURITY IS PROJECT-MANAGER;
- SECURITIES ARE D-ORMISTON, S-MENNEL;
- SEC L-HANNON;

SOURCE statement MEMO section

Purpose:
To identify information not contained within the system documentation that is relevant to the understanding of the system. The SOURCE may be a person, a document (such as a practice or guideline), etc.

Syntax:

```
SOURCE IS source-name(s) ;
```

Complementary Statements:
APPLIES statement in DEFINE section for SOURCE name.

Usage Rules:

- A name may have several SOURCES.

Synonyms:

SRC SOURCES

Examples:

```
- SOURCE IS ENG-LETTER-1-MAY-1973;

- SOURCE: SDP-3-C ;
```

SYNONYMS statement MEMO section

Purpose:
To give SYNONYMS for the name of the section. Can be used to define short forms for section-names in the documentation. Also can be used to resolve name conflicts within the system. Thus it is useful for reducing the manual effort of documentation.

Syntax:

<u>SYNONYMS</u> ARE synonym-name(s) ;

Complementary Statements:
DESIGNATE section.

Usage Rules:

- The statement may be used in any section except a DEFINE section for a SYNONYM.

- A name may have several SYNONYMS.

Synonyms:

SYN	SYNONYM

Examples:

- SYNONYMS ARE M-11, MEMO-11;

- SYNONYM IS MEMO-11;

- SYN ALPHA;

TRACE-KEY statement MEMO section

Purpose:
To associate a list of trace-keys with a name so that correspondences between objects in different data bases may be made.

Syntax:

<u>TRACE-KEY</u> trace-key-name(s) ;

Complementary Statements:
APPLIES statement in DEFINE section for TRACE-KEY name.

Usage Rules:
- The names in the name list must be trace-key names.

Synonyms:

TKEY

Examples:

- TRACE-KEY module-a;

- TKEY part-1, part-2;

4.12 OUTPUT section header statement

Purpose:

To allow a detailed description of an OUTPUT. An OUTPUT is used to describe a collection of information produced by the target system, but is used external to that system. The OUTPUT section is used to show the flow of data from the system to the outside world. Hence, it crosses the system boundary. It can also be used to locate and uniquely identify each system output.

Syntax:

```
OUTPUT output-name(s) ;
```

Usage Rules:

-Several OUTPUTS may be defined at a time.

Synonyms:

OUT

Examples:

- OUTPUT OUT-432;
- OUTPUT PAYROLL-CHECK;
- OUT OUT-431;

Purpose:
To associate assertions about the attributes of names with other names for the purposes of consistency checking.

Syntax:

```
ASSERT name attribute-name attribute-value

                   [, name attribute-name attribute-value] ...;
```

Complementary Statements:
None.

Usage Rules:
- Name may be any type of name.

Synonyms:

ASRT

Examples:

- ASSERT data-name-1 type character;

- ASRT sine-function arguments 1,
  coord-function arguments 2;

ATTRIBUTES statement OUTPUT section

Purpose:
To specify properties or characteristics particular to a given section.

Syntax:

```
                         { attv-name } [               { attv-name } ]
ATTRIBUTES ARE attr-name {           } [ ,attr-name    {           } ] ..
                         {  integer  } [               {  integer  } ]
```

Complementary Statements:
none.

Usage Rules:
-It may be used in any section.

-A name may have several ATTRIBUTES

Synonyms:

ATTR ATTRIBUTE

Examples:

- ATTRIBUTES ARE FORMAT NUMERIC, LENGTH 6;

- ATTRIBUTES ARE FREQUENCY 100, VOLUME 10;

- ATTR CHAR ZZZ9V9;

CLASSIFICATION statement OUTPUT section

Purpose:
To associate security CLASSIFICATION requirements with data in the target system.

Syntax:

```
    CLASSIFICATION classification-name [ integer ]
                   [, classification-name [ integer ]]...   ;
```

Complementary Statements:
None.

Usage Rules:
- The name must be a CLASSIFICATION name.

Synonyms:

CLS   CLASSIFICATIONS

Examples:

- CLASSIFICATION IS PERSONNEL, SEC-LEVEL 3;

- CLS RING-LEVEL 2, UPDATE;

CONSISTS statement OUTPUT section

Purpose:

To describe the combination of GROUPS, and/or ELEMENTS which make up this OUTPUT. This implies that each instance of the OUTPUT will contain values of the GROUP and ELEMENT names. A GROUP or ELEMENT may be repeated the number of times denoted by the SYSTEM-PARAMETER.

Syntax:

```
                                             element-
CONSISTS OF [ system-parameter ]   group-name

                                                  element-
              [ , [ system-parameter ]   group-name ] ...  ;
```

Complementary Statements:

CONTAINED statement in a GROUP or ELEMENT section.

Usage Rules:

-The names, other than the system-parameters, must be GROUP or ELEMENT names.

-An OUTPUT may contain several GROUPS or ELEMENTS.

Synonyms:

CSTS

Examples:

- CONSISTS OF TWO DATA-GROUP-1;

- CONSISTS: DATA-GROUP-1, ELEMENT-A;

- CSTS OF SPAN-ELEMENT-A;

- CSTS: GROUP-NO-1, GROUP-NO-2;

CONTAINED statement OUTPUT section

Purpose:

To give the SETS that contain this OUTPUT. An OUTPUT being contained in a SET means that the data values contained in the OUTPUT will be included in the logical SET.

Syntax:

```
     CONTAINED IN set-name(s) ;
```

Complementary Statements:

CONSISTS statement in SET section.

Usage Rules:

-The names must be SET names.

-Several SETS may contain a given OUTPUT.

Synonyms:

CNTD

Examples:

- CONTAINED IN MASTER-FILE;
- CNTD: HS-1,HS-2;
- CNTD FILE-1;

DERIVED statement OUTPUT section

Purpose:
To give a PROCESS that DERIVES values for the OUTPUT and, optionally, the SETS, INPUTS, ENTITIES, GROUPS, and/or ELEMENTS used in the derivation.

Syntax:

```
                                          [        group-          ]
                                          [       entity-          ]
DERIVED BY   process-name(s)  [ USING      set-name(s)   ] ;
                                          [        input-          ]
                                          [      element-          ]
```

Complementary Statements:
DERIVES or USES statement in a PROCESS section and USED BY statement in a SET, INPUT, ENTITY, GROUP or ELEMENT section.

Usage Rules:
- Several PROCESSES may derive values for an OUTPUT.

Synonyms:

DRVD USG

Examples:

- DERIVED BY PROCESS-A USING INPUT-1;

- DERIVED BY PROCESS-1 USING ENTITY-A, ENTITY-B;

- DRVD PROCESS-Q USG INPUT-1;

- DRVD PROCESS-NAME USG ENTITY-A, GROUP-B;

DESCRIPTION statement OUTPUT section

Purpose:

To give a text DESCRIPTION of the section being described, and to state any information which cannot be easily or accurately stated with the syntax applicable for a given section.

Syntax:

```
DESCRIPTION ;
         comment-entry ;
```

Complementary Statements:

None.

Usage Rules:

- See chapter 2, section 10, for the rules concerning comment entries.

Synonyms:

DESC

Examples:

```
DESCRIPTION;
   THIS ALLOWS YOU TO DESCRIBE IN NARRATIVE FORM WHAT YOU EXPECT
THIS SECTION TO DO;

DESC;
   ANY RELEVANT INFORMATION GOES HERE;
```

GENERATED statement OUTPUT section

Purpose:
To identify the PROCESS which is responsible for producing this OUTPUT.

Syntax:

GENERATED BY process-name(s) ;

Complementary Statements:
GENERATES statement in PROCESS section.

Usage Rules:

- The names must be PROCESS names.
- An OUTPUT can be GENERATED by more than one PROCESS.

Synonyms:

GEND

Examples:

- GENERATED BY OUTPUT-PROCESS-1;
- GEND BY PROCESS-UPDATE;

HAPPENS statement OUTPUT section

Purpose:

To give the volume for this OUTPUT. More than one instance of an OUTPUT may occur over some period of time. The number of instances of the OUTPUT which occur in a time INTERVAL is expressed with this statement.

Syntax:

HAPPENS system-parameter TIMES-PER interval-name ;

Complementary Statements:

None.

Usage Rules:

-The name must be an INTERVAL name.

-The statement may be given as many times as necessary for different INTERVALS.

Synonyms:

HAP TIMP

Examples:

- HAPPENS TWELVE TIMES-PER INT-A;

- HAP THREE TIMP INT-2;

KEYWORDS statement OUTPUT section

Purpose:
To selectively retrieve information from the URA data-base. A collection of information may be marked with a unique identifier (KEY) and later retrieved.

Syntax:

KEYWORDS ARE keyword-name(s) ;

Complementary Statements:
APPLIES statement in DEFINE section for a keyword.

Usage Pules:

-A section may have several KEYWORDS

Synonyms:

KEY KEYWORD

Examples:

- KEYWORD IS PAYROLL;

- KEY IS CON-C1;

- KEYWORDS ARE EMP, EMPL, EMPLOYEE;

PART statement OUTPUT section

Purpose:

To show the structural relationship of this OUTPUT to a higher-level OUTPUT. This statement can be used to express a top-down or bottom-up view of the system.

Syntax:

<u>PART</u> OF output-name ;

Complementary Statements:

SUBPARTS statement in an OUTPUT section.

Usage Rules:

-The name must be an OUTPUT name.

-Only one OUTPUT name can be given, hence, only a tree structure may be established.

Synonyms:

none.

Examples:

-PART OF OUTPUT-897;

RECEIVED statement OUTPUT section

Purpose:
To show which INTERFACE uses or receives the OUTPUT.

Syntax:

RECEIVED BY interface-name(s) ;

Complementary Statements:
RECEIVES statement in INTERFACE section.

Usage Rules:
-The names must be INTERFACE names.

Synonyms:
RCVD

Examples:

- RECEIVED BY RWF-104;

- RCVD DEPT-89;

RESPONSIBLE-PROBLEM-DEFINER statement OUTPUT section

Purpose:

To associate the PROBLEM-DEFINER with those sections for which he is RESPONSIBLE.

Syntax:

RESPONSIBLE-PROBLEM-DEFINER IS problem-definer-name ;

Complementary Statements:

RESPONSIBLE FOR statement in PROBLEM-DEFINER section.

Usage Rules:

- Only one PROBLEM-DEFINER may be RESPONSIBLE for any section, hence, this statement may only be used once per section.

Synonyms:

RPD

Examples:

- RESPONSIBLE-PROBLEM-DEFINER IS AL-DICKEY;

- RPD A-HERSHEY;

SECURITY statement OUTPUT section

Purpose:

To associate SECURITY keys with a section which may be used to limit access to the information given in this section. Note: The SECURITY given refers to the Problem Statement information , not the information in the target system.

Syntax:

```
SECURITY IS security-name(s) ;
```

Complementary Statements:

APPLIES statement in a DEFINE section for a SECURITY.

Usage Rules:

- A name may have several SECURITIES.

Synonyms:

SEC SECURITIES

Examples:

- SECURITY IS PROJECT-MANAGER;
- SECURITIES ARE D-ORMISTON, S-MENNEL;
- SEC L-HANNON;

SEE-MEMO statement   OUTPUT section

Purpose:

To indicate that information related to this section, and possibly other sections, is contained within the documentation. The information is contained in the MEMO(S) designated herein.

Syntax:

```
SEE-MEMO memo-name(s)  ;
```

Complementary Statements:

APPLIES statement in a MEMO section.

Usage Rules:

- A section may have several such statements.

Synonyms:

SM   SEE-MEMOS

Examples:

- SEE-MEMO BW-05-03-75-01;
- SEE-MEMOS: PROJ-MGR-106, PROJ-MGR-109;
- SM EPB-37, EPB-38;

SOURCE statement OUTPUT section

Purpose:

To identify information not contained within the system documentation that is relevant to the understanding of the system. The SOURCE may be a person, a document (such as a practice or guideline), etc.

Syntax:

SOURCE IS source-name(s) ;

Complementary Statements:

APPLIES statement in DEFINE section for SOURCE name.

Usage Rules:

- A name may have several SOURCES.

Synonyms:

SRC	SOURCES

Examples:

- SOURCE IS ENG-LETTER-1-MAY-1973;
- SOURCE: SDP-3-0;

SUBPARTS statement OUTPUT section

Purpose:

To show the structural relationship of this OUTPUT to lower-level OUTPUT(S). This statement can be used to express a top-down or bottom-up view of the system.

Syntax:

<u>SUBPARTS</u> ARE output-name(s) ;

Complementary Statements:

PART statement in an OUTPUT section.

Usage Rules:

-The names must be OUTPUT names.

-An OUTPUT may be composed of several other OUTPUTS.

Synonyms:

SUBP

Examples:

- SUBPARTS ARE OUT-101, OUT-103;

- SUBP OUT-309, OUTPUT-897;

SYNONYMS statement OUTPUT section

Purpose:

To give SYNONYMS for the name of the section. Can be used to define short forms for section-names in the documentation. Also can be used to resolve name conflicts within the system. Thus it is useful for reducing the manual effort of documentation.

Syntax:

```
SYNONYMS ARE synonym-name(s) ;
```

Complementary Statements:

DESIGNATE section.

Usage Rules:

- The statement may be used in any section except a MEMO section, or a DEFINE section for a SYNONYM.

- A name may have several SYNONYMS.

Synonyms:

SYN SYNONYM

Examples:

- SYNONYMS ARE O-11, OUTPUT-11;

- SYNONYM IS OUTPUT-11;

- SYN ALPHA;

TRACE-KEY statement OUTPUT section

Purpose:
To associate a list of trace-keys with a name so that correspondences between objects in different data bases may be made.

Syntax:

<u>TRACE-KEY</u> trace-key-name(s) ;

Complementary Statements:
APPLIES statement in DEFINE section for TRACE-KEY name.

Usage Rules:
- The names in the name list must be trace-key names.

Synonyms:

TKEY

Examples:

- TRACE-KEY module-a;

- TKEY part-1, part-2;

4.13 PROBLEM-DEFINER section header statement

Purpose:

To define a PROBLEM-DEFINER or DEFINERS. The PROBLEM-DEFINER is the person responsible for one or more URL object definitions. This section identifies for which other sections within the documentation the PROBLEM-DEFINER has responsibility. This is useful in establishing good documentation controls for the system.

Syntax:

PROBLEM-DEFINER problem-definer-name(s) ;

Usage Rules:

-Must be the first statement in a PROBLEM DEFINER section.

-Several PROBLEM-DEFINERS may be defined at once.

Synonyms:

PD PROBLEM-DEFINERS

Examples:

- PROBLEM-DEFINER J-SUPTES;

- PROBLEM-DEFINERS: P-REZK, J-SMITH;

- PD: E-WINTERS;

ASSERT statement PROBLEM-DEFINER section

Purpose:
To associate assertions about the attributes of names with other names for the purposes of consistency checking.

Syntax:

```
ASSERT name attribute-name attribute-value
                    [, name attribute-name attribute-value] ...;
```

Complementary Statements:
None.

Usage Rules:
- Name may be any type of name.

Synonyms:

ASRT

Examples:

- ASSERT data-name-1 type character;
- ASRT sine-function arguments 1,
  coord-function arguments 2;

ATTRIBUTES statement PROBLEM-DEFINER section

Purpose:
To specify properties or characteristics particular to a given section.

Syntax:

```
                              { attv-name } [                { attv-name } ]
     ATTRIBUTES ARE attr-name {           } [ ,attr-name {             } ]...
                              {  integer  } [                {  integer  } ]
```

Complementary Statements:
none.

Usage Rules:

-A name may have several ATTRIBUTES

Synonyms:

ATTR ATTRIBUTE

Examples:

- ATTRIBUTES ARE FORMAT NUMERIC, LENGTH 6;

- ATTRIBUTES ARE FREQUENCY 100, VOLUME 10;

- ATTR CHAR ZZZ9V9;

Purpose:

To give a text DESCRIPTION of the section being described, and to state any information which cannot be easily or accurately stated with the syntax applicable for a given section.

Syntax:

```
     DESCRIPTION :
            comment-entry ;
```

Complementary Statements:

None.

Usage Rules:

- See chapter 2, section 10, for the rules concerning comment entries.

Synonyms:

DESC

Examples:

```
     DESCRIPTION;
        THIS ALLOWS YOU TO DESCRIBE IN NARRATIVE FORM WHAT YOU EXPECT
     THIS SECTION TO DO;

     DESC;
        ANY RELEVANT INFORMATION GOES HERE;
```

KEYWORDS statement PROBLEM-DEFINER section

Purpose:
To selectively retrieve information from the URA data-base. A collection of information may be marked with a unique identifier (KEY) and later retrieved.

Syntax:

KEYWORDS ARE keyword-name(s) ;

Complementary Statements:
APPLIES statement in DEFINE section for a keyword.

Usage Rules:

-A section may have several KEYWORDS

Synonyms:

KEY KEYWORD

Examples:

- KEYWORD IS PAYROLL;

- KEY IS CON-C1;

- KEYWORDS ARE EMP, EMPL, EMPLOYEE;

MAILBOX statement PROBLEM-DEFINER section

Purpose:

To identify the location or address where this PROBLEM-DEFINER may be reached.

Syntax:

MAILBOX IS mailbox-name ;

Complementary Statements:

APPLIES statement in DEFINE section for a MAILBOX.

Usage Rules:

- The name must be a MAILBOX name.
- A PROBLEM-DEFINER may only have one MAILBOX.

Synonyms:

BOX MBX MAILBOXES

Examples:

- MAILBOX IS USERID-AA110;
- BOX IS FOUR-FORTY-FIVE-HAMILTON-AVE;
- MBX IS FIVE-WORLD-TRADE-CENTER;

Purpose:

To give the sections for which a PROBLEM-DEFINER is responsible.

Syntax:

```
    RESPONSIBLE FOR name(s) ;
```

Complementary Statements:

RESPONSIBLE-PROBLEM-DEFINER statement.

Usage Rules:

-The names may be any type of name except a PROBLEM-DEFINER name or a MAILBOX name.

-Only one PROBLEM-DEFINER may be RESPONSIBLE for any section.

Synonyms:

```
    RESP        RES
```

Examples:

```
    - RESPONSIBLE FOR P-101;

    - RESP FOR P-10,P-11,P-12,P-13,P-14;
```

SECURITY statement PROBLEM-DEFINER section

Purpose:

To associate SECURITY keys with a section which may be used to limit access to the information given in this section. Note: The SECURITY given refers to the Problem Statement information , not the information in the target system.

Syntax:

```
SECURITY IS security-name(s) ;
```

Complementary Statements:

APPLIES statement in a DEFINE section for a SECURITY.

Usage Rules:

- A name may have several SECURITIES.

Synonyms:

SEC SECURITIES

Examples:

- SECURITY IS PROJECT-MANAGER;

- SECURITIES ARE D-ORMISTON, S-MENNEL;

- SEC L-HANNON;

Purpose:
To indicate that information related to this section, and possibly other sections, is contained within the documentation. The information is contained in the MEMO(S) designated herein.

Syntax:

```
SEE-MEMO memo-name(s) ;
```

Complementary Statements:
APPLIES statement in a MEMO section.

Usage Rules:

- A section may have several such statements.

Synonyms:

SM	SEE-MEMOS

Examples:

- SEE-MEMO BW-35-03-75-01;

- SEE-MEMOS: PROJ-MGR-106, PROJ-MGR-109;

- SM EDB-37, EDB-38;

Purpose:

To identify information not contained within the system documentation that is relevant to the understanding of the system. The SOURCE may be a person, a document (such as a practice or guideline), etc.

Syntax:

```
SOURCE IS source-name(s) ;
```

Complementary Statements:

APPLIES statement in DEFINE section for SOURCE name.

Usage Rules:

- A name may have several SOURCES.

Synonyms:

SRC SOURCES

Examples:

- SOURCE IS ENG-LETTER-1-MAY-1973;
- SOURCE: SDP-3-0;

SYNONYMS statement PROBLEM-DEFINER section

Purpose:

To give SYNONYMS for the name of the section. Can be used to define short forms for section-names in the documentation. Also can be used to resolve name conflicts within the system. Thus it is useful for reducing the manual effort of documentation.

Syntax:

```
SYNONYMS ARE synonym-name(s) ;
```

Complementary Statements:

DESIGNATE section.

Usage Rules:

- The statement may be used in any section except a MEMO section, or a DEFINE section for a SYNONYM.

- A name may have several SYNONYMS.

Synonyms:

SYN SYNONYM

Examples:

- SYNONYMS ARE P-11, PROBLEM-DEFINER-11;

- SYNONYM IS PROBLEM-DEFINER-11;

- SYN ALPHA;

TRACE-KEY statement PROBLEM-DEFINER section

Purpose:

To associate a list of trace-keys with a name so that correspondences between objects in different data bases may be made.

Syntax:

```
    TRACE-KEY trace-key-name(s) ;
```

Complementary Statements:

APPLIES statement in DEFINE section for TRACE-KEY name.

Usage Rules:

- The names in the name list must be trace-key names.

Synonyms:

TKEY

Examples:

- TRACE-KEY module-a;
- TKEY part-1, part-2;

4.14 PROCESS section header statement

Purpose:

To allow a detailed description of a PROCESS or PROCESSES. This section is used to show how data is used within the target system. For instance, a PROCESS can validate INPUTS, produce OUTPUTS , store and manipulate data to meet the objectives of the system, and cause the initiation of additional PROCESS(ES). It is also used to show the structure of the system and its component subsystems.

Syntax:

<u>PROCESS</u> process-name(s) ;

Usage Rules:

-Must be the first statement in a PROCESS section.

-Several PROCESSES may be defined at once.

Synonyms:

PROC PRC

Examples:

- PROCESS P-101;

- PROC P-32, P-86;

- PROCESS P-789,P-539;

ASSERT statement **PROCESS section**

Purpose:
To associate assertions about the attributes of names with other names for the purposes of consistency checking.

Syntax:

```
ASSERT name attribute-name attribute-value

                 [, name attribute-name attribute-value] ...;
```

Complementary Statements:
None.

Usage Rules:
- Name may be any type of name.

Synonyms:

ASRT

Examples:

- ASSERT data-name-1 type character;

- ASRT sine-function arguments 1,
        coord-function arguments 2;

ATTRIBUTES statement PROCESS section

Purpose:

Syntax:

```
                                { attv-name } [                 { attv-name } ]
ATTRIBUTES ARE attr-name        {           } [ ,attr-name      {           } ] ...
                                {  integer  } [                 {  integer  } ]
```

Complementary Statements:
none.

Usage Rules:

-A name may have several ATTRIBUTES

Synonyms:

ATTR ATTRIBUTE

Examples:

- ATTRIBUTES ARE FORMAT NUMERIC, LENGTH 6;
- ATTRIBUTES ARE FREQUENCY 100, VOLUME 10;
- ATTR CHAR ZZZ9V9;

DERIVES statement PROCESS section

Purpose:

To give the data which is DERIVED by this PROCESS , and, optionally, the data used to DERIVE it.

Syntax:

```
                    set-              [         set-             ]
                 output-              [       input-             ]
     DERIVES  element-name(s)  [ USING element-name(s)     ] ;
                 entity-              [       entity-            ]
                  group-              [        group-            ]
```

Complementary Statements:

DERIVED or USED BY statements in SET, ELEMENT, ENTITY, GROUP, or OUTPUT sections and USES statement in PROCESS section.

Usage Rules:

-A single PROCESS may DERIVE several different SETS, OUTPUTS, ELEMENTS, ENTITIES, or GROUPS.

Synonyms:

DRVS USG

Examples:

- DERIVES ELEMENT-407-X USING ELEMENT-407-V;

- DERIVES ELEMENT-147 USING ELEMENT-48, ELEMENT-49, ELEMENT-50;

- DRVS ELE-22 USG ELE-221;

- DRVS ELE-186 USG ELE-1, ELE-17, ELE-23;

DESCRIPTION statement PROCESS section

Purpose:

To give a text DESCRIPTION of the section being described, and to state any information which cannot be easily or accurately stated with the syntax applicable for a given section.

Syntax:

```
    DESCRIPTION ;
           comment-entry ;
```

Complementary Statements:

None.

Usage Rules:

- See chapter 2, section 11, for the rules concerning comment entries.

Synonyms:

DESC

Examples:

```
DESCRIPTION;
   THIS ALLOWS YOU TO DESCRIBE IN NARRATIVE FORM WHAT YOU EXPECT
THIS SECTION TO DO;

DESC;
   ANY RELEVANT INFORMATION GOES HERE;
```

GENERATES statement PROCESS section

Purpose:
To give those OUTPUTS which are GENERATED by this PROCESS.

Syntax:

```
GENERATES output-name(s) ;
```

Complementary Statements:
GENERATED statement in OUTPUT section.

Usage Rules:
-The names must be OUTPUT names.

Synonyms:

GENS

Examples:

```
- GENERATES FIRST-OUTPUT;

- GENERATES OUTPUT-1, OUTPUT-2;

- GENS OUT-1;

- GENS OUT-A,OUT-B;
```

HAPPENS statement PROCESS section

Purpose:
To give the number of times the PROCESS is used per INTERVAL. More than one instance of a PROCESS may occur over some period of time. The number of instances of the PROCESS which occur in a time INTERVAL is expressed with this statement.

Syntax:

```
HAPPENS system-parameter TIMES-PER interval-name ;
```

Complementary Statements:
None.

Usage Rules:
-The name must be an INTERVAL name.

-The statement may be given as many times as necessary for different INTERVALS.

Synonyms:

HAP	TIMP

Examples:

- HAPPENS SIX TIMES-PER NEW-INTERVAL;

- HAP ONE TIMP OLD-DATE-INT;

INCEPTION-CAUSES statement PROCESS section

Purpose:
To link an EVENT or EVENTS to the inception of the PROCESS .

Syntax:

```
     INCEPTION-CAUSES event-name(s) ;
```

Complementary Statements:
INCEPTION statement in an EVENT section.

Usage Rules:

-The names must be EVENT names.

-A PROCESS may initiate several EVENTS.

Synonyms:

INCC

Examples:

```
     - INCEPTION-CAUSES UPDATE-EVT;

     - INCC EVENT-1,EVENT-2;
```

Purpose:

To specify an EVENT/EVENTS, INPUT/INPUTS, or PROCESS/PROCESSES which interrupt this PROCESS. Also, to specify CONDITIONS for which changes of state will cause interruption of this PROCESS.

Syntax:

```
                       event-
     INTERRUPTED BY    input-name(s) ;
                     process-


                                                  { TRUE  }
     INTERRUPTED WHEN condition-name BECOMES {       } ;
                                                  { FALSE }
```

Complementary Statements:

INTERRUPTS statement in the EVENT, INPUT, and PROCESS sections, and BECOMING INTERRUPTS statement in the CONDITION section.

Usage Rules:

- A PROCESS may be INTERRUPTED by several EVENTS, INPUTS, or PROCESSES.
- Only *one* CONDITION may be specified in a single statement. Separate statements are required for each CONDITION.

Synonyms:

INTD

Examples:

- INTERRUPTED BY PURCHASE-ORDER-DELAY;
- INTD HIGH-PRIO-INPUT, NEW-TASK-INPUT;
- INTERRUPTED WHEN END-OF-FILE BECOMES FALSE ;
- INTD WHEN MACHINE-BREAKDOWN T;

INTERRUPTS statement PROCESS section

Purpose:
To specify PROCESS(ES) which are interrupted by this PROCESS.

Syntax:

INTERRUPTS process-name(s);

Complementary Statements:
INTERRUPTED statement in the PROCESS section.

Usage Rules:
- A PROCESS may INTERRUPT several other PROCESSES.

Synonyms:

INTS

Examples:

- INTERRUPTS SUBPROCESS-A, SUBPROCESS-B;

- INTS SWITCHING-OPERATION;

KEYWORDS statement PROCESS section

Purpose:

To selectively retrieve information from the URA data-base. A collection of information may be marked with a unique identifier (KEY) and later retrieved.

Syntax:

```
KEYWORDS ARE keyword-name(s) ;
```

Complementary Statements:

APPLIES statement in DEFINE section for a keyword.

Usage Rules:

-A section may have several KEYWORDS

Synonyms:

KEY KEYWORD

Examples:

-KEY ON-LINE PROCESS;

-KEYWORD TERMINAL;

MAINTAINS statement PROCESS section

Purpose:

To give the RELATIONS and SUBSETTING-CRITERIA which are MAINTAINED by this PROCESS.

Syntax:

```
                        relation-
   MAINTAINS subsetting-criteria-name(s) ;
```

Complementary Statements:

MAINTAINED statement in DEFINE section for SUBSETTING-CRITERION, and MAINTAINED statement in RELATION section.

Usage Rules:

-The names must be either RELATION or SUBSETTING-CRITERIA names.

-A PROCESS may MAINTAIN several RELATIONS and SUBSETTING-CRITERIA.

Synonyms:

MTNS

Examples:

- MAINTAINS RELATION-SET;

- MTNS FIRST-RELATION, FIFTY-FIRST-SET;

MAINTAINS statement PROCESS section

Purpose:

To give the RELATIONS and SUBSETTING-CRITERIA which are MAINTAINED by this PROCESS.

Syntax:

```
                      relation-
MAINTAINS subsetting-criteria-name(s) ;
```

Complementary Statements:

MAINTAINED statement in DEFINE section for SUBSETTING-CRITERION, and MAINTAINED statement in RELATION section.

Usage Rules:

- The names must be either RELATION or SUBSETTING-CRITERIA names.

- A PROCESS may MAINTAIN several RELATIONS and SUBSETTING-CRITERIA.

Synonyms:

MTNS

Examples:

- MAINTAINS RELATION-SET;

- MTNS FIRST-RELATION, FIFTY-FIRST-SET;

PART statement PROCESS section

Purpose:

To show the structural relationship of this PROCESS to a higher-level PROCESS. This statement can be used to express a top-down or bottom-up view of the system.

Syntax:

```
PART OF process-name ;
```

Complementary Statements:

SUBPARTS statement in a PROCESS section.

Usage Rules:

-The name must be a PROCESS name.

-Only one PROCESS name may be given, hence, only a tree structure can be established.

Synonyms:

none.

Examples:

```
-PART OF PAYROLL-SYSTEM;
```

PERFORMED statement PROCESS section

Purpose:
To give the PROCESSOR that performs the PROCESS.

Syntax:

```
    PERFORMED BY processor-name ;
```

Complementary Statements:
PERFORMS statement in PROCESSOR section.

Usage Rules:
- Only one PROCESSOR name may be given.

Synonyms:

PFMD

Examples:

- PERFORMED BY CPU-1;

- PFMD PROCESSOR-NC-1;

PROCEDURE statement PROCESS section

Purpose:
To describe the sequence of operations needed to implement this PROCESS.

Syntax:

```
PROCEDURE ;
        comment-entry ;
```

Complementary Statements:
None.

Usage Rules:
-Only one PROCEDURE statement may be given for any PROCESS.

Synonyms:

PRCD PRD

Examples:

- PROCEDURE;

  1. READ THE DATA FROM THE FILE

  2. CHECK TRANSACTION CODE

  3. CALL APPROPRIATE TRANSACTION PROCESS;

- PRCD;

  ANY RELEVANT COMMENTS TO AID THE PROGRAM DESIGNER;

RECEIVES statement PROCESS section

Purpose:
To give the INPUTS RECEIVED by this PROCESS.

Syntax:

<u>RECEIVES</u> input-name(s) ;

Complementary Statements:
RECEIVED statement in INPUT section.

Usage Rules:
- The names must be INPUT names.

- A PROCESS may RECEIVE more than one INPUT.

Synonyms:

RCVS

Examples:

- RECEIVES INPUT-100;

- RECEIVES INPUT-4A, INPUT-4B;

- RCVS INPUT-A100;

RESPONSIBLE-PROBLEM-DEFINER statement PROCESS section

Purpose:
To associate the PROBLEM-DEFINER with those sections for which he is RESPONSIBLE.

Syntax:

RESPONSIBLE-PROBLEM-DEFINER IS problem-definer-name ;

Complementary Statements:
RESPONSIBLE FOR statement in PROBLEM-DEFINER section.

Usage Rules:

- Only one PROBLEM-DEFINER may be RESPONSIBLE for any section, hence, this statement may only be used once per section.

Synonyms:

RPD

Examples:

- RESPONSIBLE-PROBLEM-DEFINER IS AL-DICKEY;

- RPD A-HERSHEY;

AD-A055 505 MICHIGAN UNIV ANN ARBOR DEPT OF INDUSTRIAL AND OPERA--ETC F/G 9/2
USER REQUIREMENTS LANGUAGE (URL) USER'S MANUAL. PART II. (REFER--ETC(U)
MAR 77 F19628-76-C-0197

UNCLASSIFIED ESD-TR-78-127-VOL-2 NL

4 OF 5
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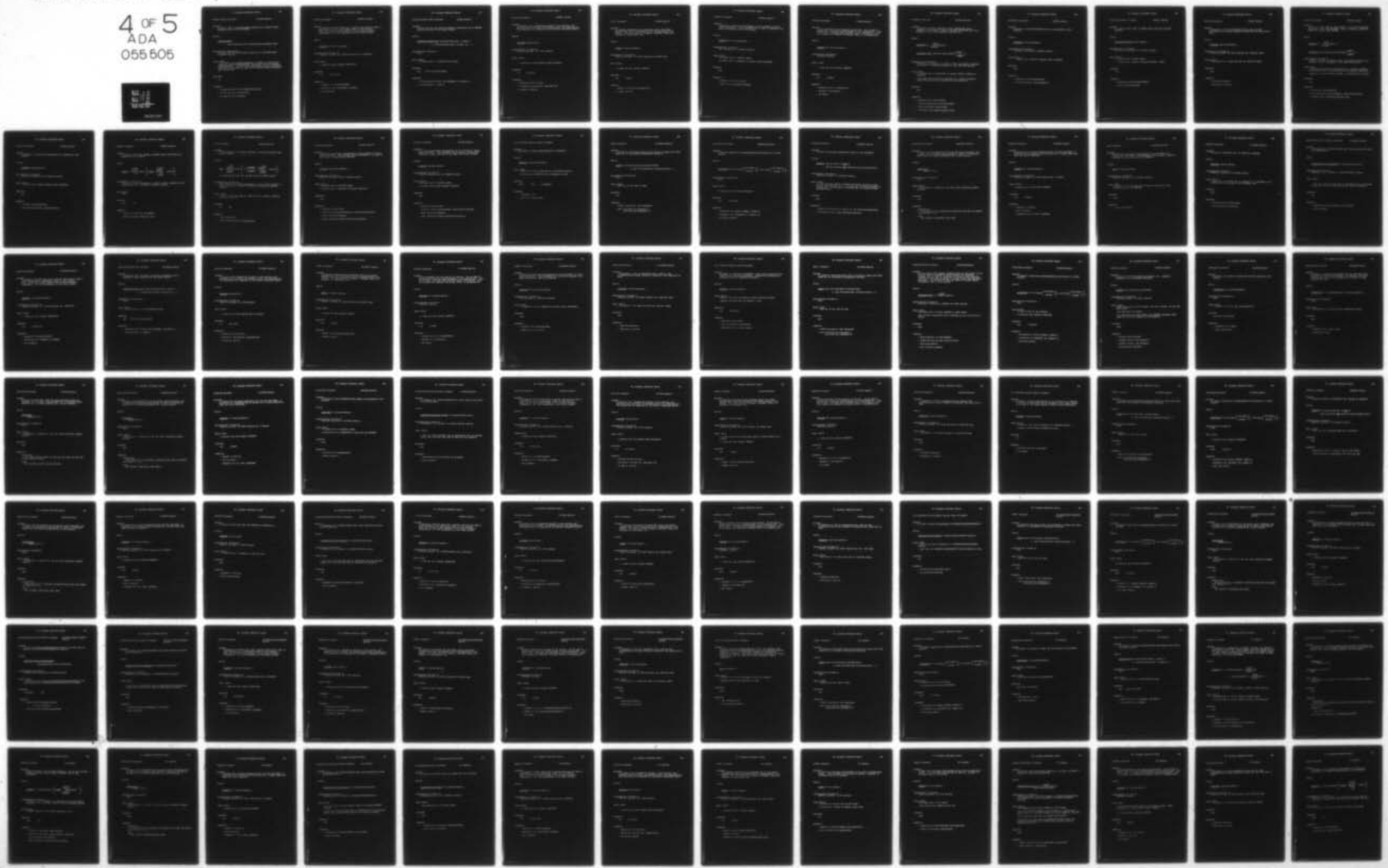

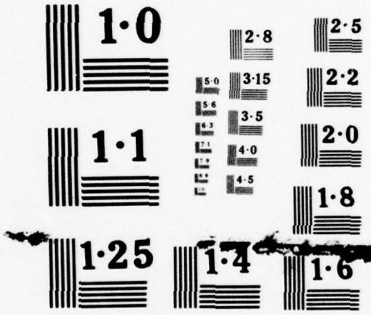
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3·15
2·2
5·6
6·3
3·5
2·0
1·1
4·0
4·5
1·8
1·25
1·4
1·6

RESOURCE-USAGE statement PROCESS section

Purpose:

To give a pair of resource-usage parameter and resource usage parameter value for the PROCESS.

Syntax:

```
    RESOURCE-USAGE :

                   system-parameter FOR resource-usage-parameter-name;
```

Complementary Statements:

RESOURCE-USAGE-PARAMETER-VALUE statement in RESOURCE-USAGE-PARAMETER section.

Usage Rules:

- The second term (system-parameter or number) is called the "resource-usage-parameter-value" (rup-value) for the resource-usage-parameter. A PROCESS may have several pairs of resource-usage-parameter-values as long as the resource usage parameters are not the same.

Synonyms:

RU

Examples:

- RESOURCE-USAGE: 10 FOR COMPLEXITY-RATING;

- RU 2000 FOR STATEMENTS-IN-PL;

- RU MAXIMUM-RATING RATING;

SECURITY statement PROCESS section

Purpose:
To associate SECURITY keys with a section which may be used to limit access to the information given in this section. Note: The SECURITY given refers to the Problem Statement information , not the information in the target system.

Syntax:

<u>SECURITY</u> IS security-name(s) ;

Complementary Statements:
APPLIES statement in a DEFINE section for a SECURITY.

Usage Rules:

- A name may have several SECURITIES.

Synonyms:

SEC SECURITIES

Examples:

- SECURITY IS PROJECT-MANAGER;

- SECURITIES ARE D-ORMISTON, S-MENNEL;

- SEC L-HANNON;

SECURITY-ACCESS-RIGHT statement PROCESS section

Purpose:

To give the type and level of security associated with a PROCESS during operation of the target system.

Syntax:

```
SECURITY-ACCESS-RIGHT classification-name [ integer ]

                [, classification-name [ integer ]]... ;
```

Complementary Statements:

None.

Usage Rules:

- The name must be a CLASSIFICATION name.

Synonyms:

SAR   SECURITY-ACCESS-RIGHTS

Examples:

- SECURITY-ACCESS-RIGHTS ARE PERSONNEL, SEC-LEVEL 3;

- SAR RING-LEVEL 2, UPDATE;

SEE-MEMO statement PROCESS section

Purpose:
To indicate that information related to this section, and possibly other sections, is contained within the documentation. The information is contained in the MEMO(S) designated herein.

Syntax:

```
SEE-MEMO memo-name(s) ;
```

Complementary Statements:
APPLIES statement in a MEMO section.

Usage Rules:

- A section may have several such statements.

Synonyms:

SM	SEE-MEMOS

Examples:

- SEE-MEMO RW-05-03-75-01;
- SEE-MEMOS: PROJ-MGR-106, PROJ-MGR-109;
- SM EPB-37, EPB-38;

SOURCE statement PROCESS section

Purpose:
To identify information not contained within the system documentation that is relevant to the understanding of the system. The SOURCE may be a person, a document (such as a practice or guideline), etc.

Syntax:

```
SOURCE IS source-name(s) ;
```

Complementary Statements:
APPLIES statement in DEFINE section for SOURCE name.

Usage Rules:

- A name may have several SOURCES.

Synonyms:

SRC SOURCES

Examples:

```
- SOURCE IS ENG-LETTER-1-MAY-1973;

- SOURCE: SDP-3-2;
```

SUBPARTS statement PROCESS section

Purpose:

To show the structural relationship of this PROCESS to lower-level PROCESS(ES). This statement can be used to express a top-down or bottom-up view of the system.

Syntax:

<u>SUBPARTS</u> ARE process-name(s) ;

Complementary Statements:

PART statement in a PROCESS section.

Usage Rules:

-The names must be PROCESS names.

-A PROCESS may be composed of several other PROCESSES.

Synonyms:

SUBP

Examples:

- SUBPARTS ARE P-101, P-103;

- SUBP P-300, INPUT-EDIT-PROCESS;

Purpose:

To give SYNONYMS for the name of the section. Can be used to define short forms for section-names in the documentation. Also can be used to resolve name conflicts within the system. Thus it is useful for reducing the manual effort of documentation.

Syntax:

```
SYNONYMS ARE synonym-name(s) ;
```

Complementary Statements:

DESIGNATE section.

Usage Rules:

- A name may have several SYNONYMS.

Synonyms:

SYN	SYNONYM

Examples:

- SYNONYMS ARE P-11, PROCESS-11;
- SYNONYM IS PROCESS-11;
- SYN ALPHA;

TERMINATED statement PROCESS section

Purpose:

To specify EVENT(S), INPUT(S), and/or PROCESS(ES) which terminate this PROCESS. Also, to specify CONDITIONS for which changes of state will terminate this PROCESS.

Syntax:

```
                          event-
TERMINATED BY             input-name(s) ;
                        process-


                                                  { TRUE  }
TERMINATED WHEN condition-name BECOMES {       } ;
                                                  { FALSE }
```

Complementary Statements:

TERMINATES statement in the EVENT, INPUT, and PROCESS sections, and BECOMING TERMINATES statement in the CONDITION section.

Usage Rules:

- A PROCESS may be TERMINATED by several EVENTS, INPUTS, or PROCESSES.

- Only *one* CONDITION may be specified in a single statement. Separate statements are required for each CONDITION.

Synonyms:

TRMD

Examples:

- TERMINATED BY END-OF-INPUT;

- TRMD BY LAST-INPUT, NEW-ORDER-INPUT;

- TRMD ERROR-PROC, SEARCH-PROC;

- TRMD WHEN FATAL-ERROR BECOMES FALSE;

TERMINATES statement PROCESS section

Purpose:

To specify a PROCESS/PROCESSES that are terminated by this PROCESS.

Syntax:

<u>TERMINATES</u> process-name(s);

Complementary Statements:

TERMINATED statement in PROCESS section.

Usage Rules:

- A PROCESS may TERMINATE several other PROCESSES.

Synonyms:

TRMS

Examples:

- TERMINATES OUTPUT-PRODUCTION;

- TRMS SET-UP-PROC, ERROR-CHECKING;

TERMINATION-CAUSES statement PROCESS section

Purpose:
To indicate which EVENT or EVENTS occur when this PROCESS finishes.

Syntax:

<u>TERMINATION-CAUSES</u> event-name(s) ;

Complementary Statements:
TERMINATION statement in an EVENT section.

Usage Rules:
- The names must be EVENT names.

- A PROCESS may terminate several different EVENTS.

Synonyms:

TERC

Examples:

- TERMINATION-CAUSES UPDATE-EVENT;

- TERC ISSUE-CHECK-EVENT;

Purpose:
To associate a list of trace-keys with a name so that correspondences between objects in different data bases may be made.

Syntax:

```
TRACE-KEY trace-key-name(s) ;
```

Complementary Statements:
APPLIES statement in DEFINE section for TRACE-KEY name.

Usage Rules:
- The names in the name list must be trace-key names.

Synonyms:
TKEY

Examples:

- TRACE-KEY module-a;
- TKEY part-1, part-2;

TRIGGERED statement PROCESS section

Purpose:

To give the EVENT/EVENTS, INPUT/INPUTS, and PROCESS/PROCESSES which can TRIGGER this PROCESS. Also, to specify a CONDITION which may trigger this PROCESS.

Syntax:

```
                    event-
     TRIGGERED BY   input-name(s) ;
                   process-


                                                { TRUE  }
     TRIGGERED WHEN condition-name BECOMES     {       } ;
                                                { FALSE }
```

Complementary Statements:

TRIGGERS statement in EVENT, INPUT, and PROCESS sections, and BECOMING TRIGGERS statement in the CONDITION section.

Usage Rules:

- Only one CONDITION may be specified in a single statement. A separate statement is necessary for each CONDITION specified.

- Several triggering EVENTS, INPUTS, or PROCESSES may be given.

Synonyms:

TRGD

Examples:

- TRIGGERED BY UPDATE-EVENT;

- TRGD ORDER-PROC, ERROR-CHECKING, INFO-RETRIEVAL-PROC;

- TRIGGERED WHEN DATA-FOUND BECOMES TRUE;

TRIGGERS statement PROCESS section

Purpose:
To specify a PROCESS/PROCESSES which are triggered by this PROCESS.

Syntax:

TRIGGERS process-name(s) ;

Complementary Statements:
TRIGGERED statement in the PROCESS section.

Usage Rules:
- A PROCESS may TRIGGER several other PROCESSES.

Synonyms:

TRGS

Examples:

- TRIGGERS MAIN-PROCESSING;

- TRGS INPUT-CHECKING, MAIN-PROCESSING;

UPDATES statement PROCESS section

Purpose:
To give the ENTITIES, GROUPS, ELEMENTS and/or SETS which are updated by this PROCESS.

Syntax:

```
                group-           [       group-          ]
               entity-           [      entity-          ]
     UPDATES  element-name(s)    [ USING element-  name(s) ] ;
                  set-           [         set-          ]
                                 [       input-          ]
```

Complementary Statements:
UPDATED or USED BY statements in ENTITY, GROUP, ELEMENT and SET sections and USES statement in PROCESS section.

Usage Rules:
none.

Synonyms:

UPDS USG

Examples:

- UPDATES HS-SEGMENT, HT-SEGMENT;

- UPDS AO-SEGMENT USING E-2, E-5;

USES statement PROCESS section

Purpose:
To give those SETS, GROUPS, ELEMENTS, INPUTS and ENTITIES used by the PROCESS.

Syntax:

```
                 set-              [               set-            ]
               input-              [  { DERIVE }  *output-         ]
       USES  element-name(s)       [ TO {        }  element-  name(s) ] ;
               group-              [  { UPDATE }   group-          ]
              entity-              [               entity-         ]
```

* Output-name(s) may only be used with the DERIVE clause.

Complementary Statements:
USED, UPDATED or DERIVED statement in a SET, GROUP, ELEMENT or ENTITY section and DERIVES or UPDATES statement in PROCESS section.

Usage Rules:
- A PROCESS may use several different SETS, GROUPS, ELEMENTS, INPUTS or ENTITIES.

Synonyms:

DEV UPD

Examples:

- USES TASK-FILE;

- USES PERSONNEL-FILE, PAYROLL-FILE;

UTILIZED statement PROCESS section

Purpose:

To show the structural relationship of this PROCESS to higher-level PROCESSES. This staement allows PROCESSES to be used by more than one higher-level PROCESS.

Syntax:

```
UTILIZED BY process-name(s) ;
```

Complementary Statements:

UTILIZES statement in the PROCESS section.

Usage Rules:

-The names must be PROCESS names.

-A PROCESS may be UTILIZED by several PROCESSES

Synonyms:

UTLD

examples:

- UTILIZED LP-ALGORITHM;
- UTILIZED COMMON-INPUT-PROCESS, COMMON-OUTPUT-PROCESS;
- UTLD: TAPE-READ-PROCESS;
- UTLD: UPDATE-BILL-PROC-1,UPDATE-BILL-PROC-2;

UTILIZES statement PROCESS section

Purpose:
To show the structural relationship of this PROCESS to lower-level PROCESSES. This statement allows several higher-level PROCESSES to share the use of the same lower-level PROCESS.

Syntax:

UTILIZES process-name(s) ;

Complementary Statements:
UTILIZED statement in the PROCESS section.

Usage Rules:

-The names must be PROCESS names.

-A PROCESS may UTILIZE several PROCESSES

Synonyms:

UTLS

Examples:

- UTILIZES LP-ALGORITHM;

- UTILIZES COMMON-INPUT-PROCESS, COMMON-OUTPUT-PROCESS;

- UTLS: TAPE-READ-PROCESS;

- UTLS: UPDATE-BILL-PROC-1,UPDATE-BILL-PROC-2;

4.15 PROCESSOR section header statement

Purpose:
To allow a detailed description of a PROCESSOR.

Syntax:

```
    PROCESSOR processor-name(s);
```

Usage Rules:
- Must be the first statement in a PROCESSOR section.
- More than one PROCESSOR may be defined at once.

Synonyms:

```
    PROCR       PRCR       PROCESSORS
```

Examples:

- PROCESSOR PR-1;
- PROCR CPU, DISK-MEMORY;

ASSERT statement PROCESSOR section

Purpose:
To associate assertions about the attributes of names with other names for the purposes of consistency checking.

Syntax:

```
ASSERT name attribute-name attribute-value
               [, name attribute-name attribute-value] ...;
```

Complementary Statements:
None.

Usage Rules:

- Name may be any type of name.

Synonyms:

ASRT

Examples:

```
- ASSERT data-name-1 type character;

- ASRT sine-function arguments 1,
         coord-function arguments 2;
```

ATTRIBUTES statement PROCESSOR section

Purpose:
To specify properties or characteristics particular to a given section.

Syntax:

```
                                 { attv-name } [                 { attv-name } ]
ATTRIBUTES ARE attr-name {             } [ ,attr-name {             } ]..
                                 {  integer  } [                 {  integer  } ]
```

Complementary Statements:
none.

Usage Rules:

-A name may have several ATTRIBUTES

Synonyms:

ATTR   ATTRIBUTE

Examples:

- ATTRIBUTES ARE FORMAT NUMERIC, LENGTH 6;

- ATTRIBUTES ARE FREQUENCY 100, VOLUME 10;

- ATTR CHAR ZZZ9V9;

CONSUMES statement PROCESSOR section

Purpose:
To give the resource consumption value for the PROCESSOR.

Syntax:

```
CONSUMES resource-name AT RATE OF

          system-parameter PER resource-usage-parameter-name;
```

Complementary Statements:
CONSUMED statement in RESOURCE section.

Usage Rules:

- A name may have several CONSUMES statements as long as they are not contradictory, i.e. , at most one CONSUMED statement is allowed for a unique pair of resource-name and resource-usage-parameter-name.

Synonyms:

CNSS

Examples:

- CONSUMES REAL TIME AT A RATE OF 10 PER NUMBER-OF-CHARACTERS;
- CNSS DOLLARS RATE X PER DIFFICULTY-GRADING;

DESCRIPTION statement PROCESSOR section

Purpose:
To give a text DESCRIPTION of the section being described, and to state any information which cannot be easily or accurately stated with the syntax applicable for a given section.

Syntax:

```
DESCRIPTION :
      comment-entry ;
```

Complementary Statements:
None.

Usage Rules:
- See chapter 2, section 10, for the rules concerning comment entries.

Synonyms:

DESC

Examples:

```
DESCRIPTION;
   THIS ALLOWS YOU TO DESCRIBE IN NARRATIVE FORM WHAT YOU EXPECT
THIS SECTION TO DO;

DESC;
   ANY RELEVANT INFORMATION GOES HERE;
```

KEYWORDS statement PROCESSOR section

Purpose:
To selectively retrieve information from the URA data-base. A collection of information may be marked with a unique identifier (KEY) and later retrieved.

Syntax:

```
KEYWORDS ARE keyword-name(s) ;
```

Complementary Statements:
APPLIES statement in DEFINE section for a keyword.

Usage Rules:

-A section may have several KEYWORDS

Synonyms:

KEY KEYWORD

Examples:

```
- KEYWORD IS PAYROLL;

- KEY IS CON-C1;

- KEYWORDS ARE EMP, EMPL, EMPLOYEE;
```

PART statement PROCESSOR section

Purpose:
To show the structural relationship of this PROCESSOR to a higher level PROCESSOR. This statement can be used to express a top-down or bottom-up view of the system.

Syntax:

PART OF processor-name;

Complementary Statements:
SUBPARTS statement in PROCESSOR section.

Usage Rules:
- Only one PROCESSOR name may be given, hence only a tree structure can be established.

Synonyms:

None.

Examples:

- PART OF MACHINES;

PERFORMS statement PROCESSOR section

Purpose:
To give the PROCESSES that the PROCESSOR performs.

Syntax:

<u>PERFORMS</u> process-name(s);

Complementary Statements:
PERFORMED statement in PROCESS section.

Usage Rules:
- More than one PROCESS may be performed by a PROCESSOR, but a PROCESS may be performed by one PROCESSOR only.

Synonyms:

PFMS

Examples:

- PERFORMS PAYROLL-PROCESSING;

- PFMS PROCESS-A, PROCESS-B;

RESPONSIBLE-PROBLEM-DEFINER statement PROCESSOR section

Purpose:

To associate the PROBLEM-DEFINER with those sections for which he is RESPONSIBLE.

Syntax:

<u>RESPONSIBLE-PROBLEM-DEFINER</u> IS problem-definer-name ;

Complementary Statements:

RESPONSIBLE FOR statement in PROBLEM-DEFINER section.

Usage Rules:

- Only one PROBLEM-DEFINER may be RESPONSIBLE for any section, hence, this statement may only be used once per section.

Synonyms:

RPD

Examples:

- RESPONSIBLE-PROBLEM-DEFINER IS AL-DICKEY;

- RPD A-HERSHEY;

SECURITY statement PROCESSOR section

Purpose:

To associate SECURITY keys with a section which may be used to limit access to the information given in this section. Note: The SECURITY given refers to the Problem Statement information , not the information in the target system.

Syntax:

```
SECURITY IS security-name(s) ;
```

Complementary Statements:

APPLIES statement in a DEFINE section for a SECURITY.

Usage Rules:

- A name may have several SECURITIES.

Synonyms:

SEC   SECURITIES

Examples:

- SECURITY IS PROJECT-MANAGER;
- SECURITIES ARE D-ORMISTON, S-MENNEL;
- SEC L-HANNON;

SECURITY-ACCESS-RIGHT statement PROCESSOR section

Purpose:

To give the type and level of security associated with a PROCESSOR during operation of the target system.

Syntax:

```
SECURITY-ACCESS-RIGHT classification-name [ integer ]

                  [, classification-name [ integer ]]...  ;
```

Complementary Statements:

None.

Usage Rules:

- The name must be a CLASSIFICATION name.

Synonyms:

SAR	SECURITY-ACCESS-RIGHTS

Examples:

- SECURITY-ACCESS-RIGHTS ARE PERSONNEL, SEC-LEVEL 3;

- SAR RING-LEVEL 2, UPDATE;

Purpose:

To indicate that information related to this section, and possibly other sections, is contained within the documentation. The information is contained in the MEMO(S) designated herein.

Syntax:

SEE-MEMO memo-name(s) ;

Complementary Statements:

APPLIES statement in a MEMO section.

Usage Rules:

- A section may have several such statements.

Synonyms:

SM SEE-MEMOS

Examples:

- SEE-MEMO BW-05-03-75-01;

- SEE-MEMOS: PROJ-MGR-106, PROJ-MGR-109;

- SM EPB-37, EPB-38;

SOURCE statement PROCESSOR section

Purpose:

To identify information not contained within the system documentation that is relevant to the understanding of the system. The SOURCE may be a person, a document (such as a practice or guideline), etc.

Syntax:

SOURCE IS source-name(s) ;

Complementary Statements:

APPLIES statement in DEFINE section for SOURCE name.

Usage Rules:

- A name may have several SOURCES.

Synonyms:

SRC SOURCES

Examples:

- SOURCE IS ENG-LETTER-1-MAY-1973;
- SOURCE: SDP-3-2;

SYNONYMS statement PROCESSOR section

Purpose:

To give SYNONYMS for the name of the section. Can be used to define short forms for section-names in the documentation. Also can be used to resolve name conflicts within the system. Thus it is useful for reducing the manual effort of documentation.

Syntax:

<u>SYNONYMS</u> ARE synonym-name(s) ;

Complementary Statements:

DESIGNATE section.

Usage Rules:

- A name may have several SYNONYMS.

Synonyms:

SYN SYNONYM

Examples:

- SYNONYMS ARE P-11, PROCESSOR-11;
- SYNONYM IS PROCESSOR-11;
- SYN ALPHA;

SUBPARTS statement PROCESSOR section

Purpose:
To show the structural relationship of this PROCESSOR to lower-level PROCESSORS. This statement can be used to express a top-down or bottom-up view of the system.

Syntax:

<u>SUBPARTS</u> ARE processor-name(s);

Complementary Statements:
PART statement in PROCESSOR section.

Usage Rules:
- A PROCESSOR may be composed of several other PROCESSORS.

Synonyms:

SUBP

Examples:

- SUBPARTS ARE HUMAN,MACHINES;

- SUBP PR-1, PR-2, PR-3;

TRACE-KEY statement PROCESSOR section

Purpose:

To associate a list of trace-keys with a name so that correspondences between objects in different data bases may be made.

Syntax:

TRACE-KEY trace-key-name(s) ;

Complementary Statements:

APPLIES statement in DEFINE section for TRACE-KEY name.

Usage Rules:

- The names in the name list must be trace-key names.

Synonyms:

TKEY

Examples:

- TRACE-KEY module-a;
- TKEY part-1, part-2;

4.16 RELATION section header statement

Purpose:

To define a RELATION or RELATIONS. This section shows how two ENTITIES are logically connected. Examples of relations are husband-to-wife or employee-to-company.

Syntax:

```
    RELATION relation-name(s) ;
```

Usage Rules:

-Must be the first statement of every RELATION section.

-Several RELATIONS may be defined at once.

Synonyms:

RLN	RELATIONS

Examples

```
- RELATION NH-RELATION;

- RLN NI-RELATION, NS-RELATION;

- RELATIONS REL-1, REL-2, REL-3;
```

ASSERT statement RELATION section

Purpose:
To associate assertions about the attributes of names with other names for the purposes of consistency checking.

Syntax:

```
ASSERT name attribute-name attribute-value

                [, name attribute-name attribute-value] ...;
```

Complementary Statements:
None.

Usage Rules:
- Name may be any type of name.

Synonyms:
ASRT

Examples:

- ASSERT data-name-1 type character;

- ASRT sine-function arguments 1,
  coord-function arguments 2;

ASSOCIATED-DATA statement RELATION section

Purpose:

To give those GROUPS and/or ELEMENTS which are the result of the RELATION being described or which describe the RELATION. Although the data may be contained in either or both ENTITIES. ASSOCIATED-DATA does not belong to either ENTITY RELATION being described. ASSOCIATED DATA does not belong to either ENTITY exclusively, but to both jointly.

Syntax:

```
                        group-
ASSOCIATED-DATA IS element-name(s) ;
```

Complementary Statements:

ASSOCIATED statement in ELEMENT and GROUP section.

Usage Rules:

-The names must be either ELEMENT or GROUP names.

-The ELEMENTS associated with a RELATION may not be part of an ENTITY.

Synonyms:

ASCD

Examples:

- ASSOCIATED-DATA IS SPAN-SEGMENT;

- ASSOCIATED-DATA IS ELE-1,ELE-2,GROUP-9;

- ASCD LINK-SEGMENT;

- ASCD ELEMENT-A,GROUP-9;

ATTRIBUTES statement RELATION section

Purpose:

To specify properties or characteristics particular to a given section.

Syntax:

```
                                 { attv-name } [               { attv-name } ]
ATTRIBUTES ARE attr-name {             } [ ,attr-name {             } ]..
                                 {  integer  } [               {  integer  } ]
```

Complementary Statements:

none.

Usage Rules:

-It may be used in any section.

-A name may have several ATTRIBUTES

Synonyms:

ATTR ATTRIBUTE

Examples:

- ATTRIBUTES ARE FORMAT NUMERIC, LENGTH 5;
- ATTRIBUTES ARE FREQUENCY 100, VOLUME 10;
- ATTR CHAR ZZZ9V9;

BETWEEN statement RELATION section

Purpose:
To give the ENTITIES which are related, e.g. Logically connected, via a particular RELATION.

Syntax:

BETWEEN entity-name AND entity-name ;

Complementary Statements:
RELATED statement in ENTITY section.

Usage Rules:

-Both names must be ENTITY names, they may, however, be the same ENTITY name.

-All RELATIONS are binary.

-All RELATIONS must have exactly one BETWEEN statement which gives the ENTITIES involved in the RELATION.

Synonyms:

BTWN

Examples:

- BETWEEN WOMAN AND MAN;
- BETWEEN ENTITY-1 AND ENTITY-2 ;
- BETWEEN RECORD-1 AND RECORD-2;
- BTWN EMP-INFO JOB-INFO ;

CARDINALITY statement RELATION section

Purpose:
To define the number of times this RELATION applies in the system.

Syntax:

<u>CARDINALITY</u> IS system-parameter ;

Complementary Statements:
None.

Usage Rules:
-A RELATION may have only one CARDINALITY.

Synonyms:

CARD OCCS OCCURRENCES

Examples:

- CARDINALITY IS TWENTY;

- CARD FORTY-SEVEN;

CONNECTIVITY statement RELATION section

Purpose:
To define the number of occurrences in the RELATION of one ENTITY with respect to the other. For example, one could specify that there is one company-entity related to many employee-entities.

Syntax:

```
CONNECTIVITY IS system-parameter TO system-parameter ;
```

Complementary Statements:
None.

Usage Rules:
- Any RELATION may have only one CONNECTIVITY given.

Synonyms:

CONN

Examples:

- CONNECTIVITY IS ONE TO ONE;

- CONN MANY TO TWO;

DERIVATION statement RELATION section

Purpose:

To give the DERIVATION rules for those RELATIONS which are derivable for the data. This implies that the RELATION being described is a DERIVED RELATION, not a direct RELATION.

Syntax:

```
DERIVATION ;
     comment-entry ;
```

Complementary Statements:

None.

Usage Rules:

- See chapter 2, section 10, for the rules concerning comment entries.

Synonyms:

DRVN

Examples:

```
DERIVATION:
   THIS RELATIONSHIP EXISTS TO SHOW HOW UPON ENTRY OF THE TIME
   CARD AN UPDATE OCCURS;
DRVN;
   ANY RELEVANT COMMENTS MAY BE ENTERED;
```

DESCRIPTION statement RELATION section

Purpose:
To give a text DESCRIPTION of the section being described, and to state any information which cannot be easily or accurately stated with the syntax applicable for a given section.

Syntax:

```
DESCRIPTION ;
        comment-entry ;
```

Complementary Statements:
None.

Usage Rules:
- See chapter 2, section 10, for the rules concerning comment entries.

Synonyms:

DESC

Examples:

```
DESCRIPTION;
    THIS ALLOWS YOU TO DESCRIBE IN NARRATIVE FORM WHAT YOU EXPECT
THIS SECTION TO DO;

DESC;
    ANY RELEVANT INFORMATION GOES HERE;
```

KEYWORDS statement RELATION section

Purpose:

To selectively retrieve information from the URA data-base. A collection of information may be marked with a unique identifier (KEY) and later retrieved.

Syntax:

<u>KEYWORDS</u> ARE keyword-name(s) ;

Complementary Statements:

APPLIES statement in DEFINE section for a keyword.

Usage Rules:

-A section may have several KEYWORDS

Synonyms:

KEY	KEYWORD

Examples:

- KEYWORD IS PAYROLL;

- KEY IS CON-C1;

- KEYWORDS ARE EMP, EMPL, EMPLOYEE;

MAINTAINED statement RELATION section

Purpose:
To designate those PROCESSES which change the instances of the ENTITIES

Syntax:

<u>MAINTAINED</u> BY process-name(s) ;

Complementary Statements:
MAINTAINS statement in PROCESS section.

Usage Rules:
- The names must be process- names.

- A RELATION may be MAINTAINED BY more than one PROCESS.

Synonyms:

MTND

Examples:

- MAINTAINED BY process-6543;

- MTND p-19,p-190;

RESPONSIBLE-PROBLEM-DEFINER statement RELATION section

Purpose:

To associate the PROBLEM-DEFINER with those sections for which he is RESPONSIBLE.

Syntax:

RESPONSIBLE-PROBLEM-DEFINER IS problem-definer-name ;

Complementary Statements:

RESPONSIBLE FOR statement in PROBLEM-DEFINER section.

Usage Rules:

- Only one PROBLEM-DEFINER may be RESPONSIBLE for any section, hence, this statement may only be used once per section.

Synonyms:

RPD

Examples:

- RESPONSIBLE-PROBLEM-DEFINER IS AL-DICKEY;

- RPD A-HERSHEY;

SECURITY statement RELATION section

Purpose:

To associate SECURITY keys with a section which may be used to limit access to the information given in this section. Note: The SECURITY given refers to the Problem Statement information , not the information in the target system.

Syntax:

SECURITY IS security-name(s) ;

Complementary Statements:

APPLIES statement in a DEFINE section for a SECURITY.

Usage Rules:

- A name may have several SECURITIES.

Synonyms:

SEC SECURITIES

Examples:

- SECURITY IS PROJECT-MANAGER;
- SECURITIES ARE D-ORMISTON, S-MENNEL;
- SEC L-HANNON;

Purpose:

To indicate that information related to this section, and possibly other sections, is contained within the documentation. The information is contained in the MEMO(S) designated herein.

Syntax:

SEE-MEMO memo-name(s) ;

Complementary Statements:

APPLIES statement in a MEMO section.

Usage Rules:

- A section may have several such statements.

Synonyms:

SM SEE-MEMOS

Examples:

- SEE-MEMO BV-05-03-75-01;

- SEE-MEMOS: PROJ-MGP-106, PROJ-MGP-109;

- SM EPR-37, EPR-38;

SOURCE statement RELATION section

Purpose:
To identify information not contained within the system documentation that is relevant to the understanding of the system. The SOURCE may be a person, a document (such as a practice or guideline), etc.

Syntax:

```
SOURCE IS source-name(s) ;
```

Complementary Statements:
APPLIES statement in DEFINE section for SOURCE name.

Usage Rules:

- It may be used in any section except a DEFINE section for a SOURCE.

- A name may have several SOURCES.

Synonyms:

SRC	SOURCES

Examples:

- SOURCE IS ENG-LETTER-1-MAY-1973;

- SOURCE: SDP-3-0;

SYNONYMS statement RELATION section

Purpose:

To give SYNONYMS for the name of the section. Can be used to define short forms for section-names in the documentation. Also can be used to resolve name conflicts within the system. Thus it is useful for reducing the manual effort of documentation.

Syntax:

SYNONYMS ARE synonym-name(s) ;

Complementary Statements:

DESIGNATE section.

Usage Rules:

- A name may have several SYNONYMS.

Synonyms:

SYN SYNONYM

Examples:

- SYNONYMS ARE R-11, RELATION-11;
- SYNONYM IS RELATION-11;
- SYN ALPHA;

TRACE-KEY statement RELATION section

Purpose:
To associate a list of trace-keys with a name so that correspondences between objects in different data bases may be made.

Syntax:

<u>TRACE-KEY</u> trace-key-name(s) ;

Complementary Statements:
APPLIES statement in DEFINE section for TRACE-KEY name.

Usage Rules:
- The names in the name list must be trace-key names.

Synonyms:

TKEY

Examples:

- TRACE-KEY module-a;

- TKEY part-1, part-2;

4.17 RESOURCE section header statement

Purpose:

To allow a detailed description of the contents of a RESOURCE. A RESOURCE is something that is consumed by the target system. It is used in the target system to model system performance.

Syntax:

```
RESOURCE resource-name(s) ;
```

Usage Rules:

- It must be the first statement in a RESOURCE section.
- Several RESOURCES may be defined at once.

Synonyms:

RSC

Examples:

- RESOURCE CPU-TIME, MAN-POWER;
- RSC MONEY;

ASSERT statement RESOURCE section

Purpose:

To associate assertions about the attributes of names with other names for the purposes of consistency checking.

Syntax:

```
ASSERT name attribute-name attribute-value
                    [, name attribute-name attribute-value] ...;
```

Complementary Statements:

None.

Usage Rules:

- Name may be any type of name.

Synonyms:

ASRT

Examples:

```
- ASSERT data-name-1 type character;

- ASRT sine-function arguments 1,
       coord-function arguments 2;
```

ATTRIBUTES statement RESOURCE section

Purpose:
To specify properties or characteristics particular to a given section.

Syntax:

```
                                  { attv-name } [                 { attv-name } ]
    ATTRIBUTES ARE attr-name      {             } [  ,attr-name   {             } ]...
                                  {  integer  } [                 {  integer  } ]
```

Complementary Statements:
none.

Usage Rules:

-A name may have several ATTRIBUTES

Synonyms:

ATTR ATTRIBUTE

Examples:

- ATTRIBUTES ARE FORMAT NUMERIC, LENGTH 6;

- ATTRIBUTES ARE FREQUENCY 100, VOLUME 10;

- ATTR CHAR ZZZ9V9;

CONSUMED statement RESOURCE section

Purpose:
To give the names of PROCESSORS that consume the RESOURCE.

Syntax:

```
CONSUMED BY processor-name(s) AT RATE OF
         system-parameter PER resource-usage-parameter-name;
```

Complementary Statements:
CONSUMES statement in PROCESSOR section.

Usage Rules:
- More than one processor-name may be specified.

Synonyms:

CNSD

Examples:

- CONSUMED BY CPU AT A RATE OF 100,000 PER MINUTE;

- CNSD PROCESSOR-A, PROCESSOR-B RATE 9000 PER JOB;

DESCRIPTION statement RESOURCE section

Purpose:
To give a text DESCRIPTION of the section being described, and to state any information which cannot be easily or accurately stated with the syntax applicable for a given section.

Syntax:

```
DESCRIPTION ;
        comment-entry ;
```

Complementary Statements:
None.

Usage Rules:
- See chapter 2, section 10, for the rules concerning comment entries.

Synonyms:

DESC

Examples:

```
DESCRIPTION;
   THIS ALLOWS YOU TO DESCRIBE IN NARRATIVE FORM WHAT YOU EXPECT
THIS SECTION TO DO;
DESC;
   ANY RELEVANT INFORMATION GOES HERE;
```

KEYWORDS statement RESOURCE section

Purpose:
To selectively retrieve information from the URA data-base. A collection of information may be marked with a unique identifier (KEY) and later retrieved.

Syntax:

KEYWORDS ARE keyword-name(s) ;

Complementary Statements:
APPLIES statement in DEFINE section for a keyword.

Usage Rules:

- A section may have several KEYWORDS

Synonyms:

KEY KEYWORD

Examples:

- KEYWORD IS PAYROLL;
- KEY IS CON-C1;
- KEYWORDS ARE EMP, EMPL, EMPLOYEE;

MEASURED statement RESOURCE section

Purpose:
To give the UNIT name that the RESOURCE is measured in.

Syntax:

MEASURED IN unit-name;

Complementary Statements:
MEASURES statement in UNIT section.

Usage Rules:
- A RESOURCE may be measured in only one UNIT.

Synonyms:
MSPD

Examples:

- MEASURED IN DOLLARS;

- MSPD MILLI-SECONDS;

RESPONSIBLE-PROBLEM-DEFINER statement RESOURCE section

Purpose:

To associate the PROBLEM-DEFINER with those sections for which he is RESPONSIBLE.

Syntax:

RESPONSIBLE-PROBLEM-DEFINER IS problem-definer-name ;

Complementary Statements:

RESPONSIBLE FOR statement in PROBLEM-DEFINER section.

Usage Rules:

- Only one PROBLEM-DEFINER may be RESPONSIBLE for any section, hence, this statement may only be used once per section.

Synonyms:

RPD

Examples:

- RESPONSIBLE-PROBLEM-DEFINER IS AL-DICKEY;

- RPD A-HERSHEY;

Purpose:

To associate SECURITY keys with a section which may be used to limit access to the information given in this section. Note: The SECURITY given refers to the Problem Statement information , not the information in the target system.

Syntax:

```
SECURITY IS security-name(s) ;
```

Complementary Statements:

APPLIES statement in a DEFINE section for a SECURITY.

Usage Rules:

- A name may have several SECURITIES.

Synonyms:

SEC SECURITIES

Examples:

- SECURITY IS PROJECT-MANAGER;
- SECURITIES ARE D-ORMISTON, S-MENNEL;
- SEC L-HANNON;

SEE-MEMO statement RESOURCE section

Purpose:

To indicate that information related to this section, and possibly other sections, is contained within the documentation. The information is contained in the MEMO(S) designated herein.

Syntax:

```
SEE-MEMO memo-name(s) ;
```

Complementary Statements:

APPLIES statement in a MEMO section.

Usage Rules:

- A section may have several such statements.

Synonyms:

SM SEE-MEMOS

Examples:

- SEE-MEMO BW-05-03-75-01;
- SEE-MEMOS: PROJ-MGR-106, PROJ-MGR-109;
- SM EPB-37, EPB-38;

SOURCE statement RESOURCE section

Purpose:

To identify information not contained within the system documentation that is relevant to the understanding of the system. The SOURCE may be a person, a document (such as a practice or guideline), etc.

Syntax:

```
SOURCE IS source-name(s) ;
```

Complementary Statements:

APPLIES statement in DEFINE section for SOURCE name.

Usage Rules:

- A name may have several SOURCES.

Synonyms:

```
SRC        SOURCES
```

Examples:

```
- SOURCE IS ENG-LETTER-1-MAY-1973;

- SOURCE: 3DP-3-0;
```

Purpose:
To give SYNONYMS for the name of the section. Can be used to define short forms for section-names in the documentation. Also can be used to resolve name conflicts within the system. Thus it is useful for reducing the manual effort of documentation.

Syntax:

```
SYNONYMS ARE synonym-name(s) ;
```

Complementary Statements:
DESIGNATE section.

Usage Rules:

- A name may have several SYNONYMS.

Synonyms:

SYN	SYNONYM

Examples:

- SYNONYMS ARE R-11, RESOURCE-11;
- SYNONYM IS RESOURCE-11;
- SYN ALPHA;

TRACE-KEY statement RESOURCE section

Purpose:

To associate a list of trace-keys with a name so that correspondences between objects in different data bases may be made.

Syntax:

<u>TRACE-KEY</u> trace-key-name(s) ;

Complementary Statements:

APPLIES statement in DEFINE section for TRACE-KEY name.

Usage Rules:

- The names in the name list must be trace-key names.

Synonyms:

TKEY

Examples:

- TRACE-KEY module-a;

- TKEY part-1, part-2;

4.18 RESOURCE-USAGE-PARAMETER section header statement

Purpose:
To allow a detailed description of RESOURCE-USAGE-PARAMETER(S).

Syntax:

RESOURCE-USAGE-PARAMETER resource-usage-parameter-name(s) ;

Usage Rules:

- Must be the first statement in a RESOURCE-USAGE-PARAMETER section.
- More than one RESOURCE-USAGE-PARAMETER may be defined at once.

Synonyms:

RUP

Examples:

- RESOURCE-USAGE-PARAMETER RUP-1;
- RUP DIFFICULTY-GRADING;

ASSERT statement

RESOURCE-USAGE-PARAMETER section

Purpose:

To associate assertions about the attributes of names with other names for the purposes of consistency checking.

Syntax:

```
ASSERT name attribute-name attribute-value
                 [, name attribute-name attribute-value] ...;
```

Complementary Statements:

None.

Usage Rules:

- Name may be any type of name.

Synonyms:

ASRT

Examples:

```
- ASSERT data-name-1 type character;

- ASRT sine-function arguments 1,
       coord-function arguments 2;
```

ATTRIBUTES statement

RESOURCE-USAGE-PARAMETER
section

Purpose:
To specify properties or characteristics particular to a given section.

Syntax:

```
                              { attv-name } [                 { attv-name } ]
ATTRIBUTES ARE attr-name {             } [ ,attr-name {             } ]...
                              {   integer   } [                 {   integer   } ]
```

Complementary Statements:
none.

Usage Rules:

-A name may have several ATTRIBUTES

Synonyms:

ATTR   ATTRIBUTE

Examples:

- ATTRIBUTES ARE FORMAT NUMERIC, LENGTH 6;

- ATTRIBUTES ARE FREQUENCY 100, VOLUME 10;

- ATTR CHAR ZZZ9V9;

DESCRIPTION statement

RESOURCE-USAGE-PARAMETER section

Purpose:

To give a text DESCRIPTION of the section being described, and to state any information which cannot be easily or accurately stated with the syntax applicable for a given section.

Syntax:

```
DESCRIPTION ;
        comment-entry ;
```

Complementary Statements:

None.

Usage Rules:

- See chapter 2, section 10, for the rules concerning comment entries.

Synonyms:

DESC

Examples:

```
DESCRIPTION;
   THIS ALLOWS YOU TO DESCRIBE IN NARRATIVE FORM WHAT YOU EXPECT
THIS SECTION TO DO;

DESC:
   ANY RELEVANT INFORMATION GOES HERE;
```

KEYWORDS statement

RESOURCE-USAGE-PARAMETER section

Purpose:

To selectively retrieve information from the URA data-base. A collection of information may be marked with a unique identifier (KEY) and later retrieved.

Syntax:

KEYWORDS ARE keyword-name(s) ;

Complementary Statements:

APPLIES statement in DEFINE section for a keyword.

Usage Rules:

- A section may have several KEYWORDS

Synonyms:

KEY KEYWORD

Examples:

- KEYWORD IS PAYROLL;
- KEY IS CON-C1;
- KEYWORDS ARE EMP, EMPL, EMPLOYEE;

RESOURCE-USAGE-PARAMETER-VALUE statement RESOURCE-USAGE-PARAMETER section

Purpose:

To give the resource-usage-parameter-value (rup value) for the pair of RESOURCE-USAGE-PARAMETER and process.

Syntax:

```
RESOURCE-USAGE-PARAMETER-VALUE :
                          system-parameter FOR process-name;
```

Complementary Statements:

RESOURCE-USAGE statement in PROCESS section.

Usage Rules:

- There may be at most one RESOURCE-USAGE-PARAMETER-VALUE for each unique pair of RESOURCE-USAGE-PARAMETER and PROCESS.

Synonyms:

RUP-VALUE   RUPV

Examples:

```
- RESOURCE-USAGE-PARAMETER-VALUE:
          10 FOR PROCESS-1;

- RUVP MAX-RATING PAYROLL-PROCESSING;
```

RESPONSIBLE-PROBLEM-DEFINER statement   RESOURCE-USAGE-PARAMETER section

Purpose:

To associate the PROBLEM-DEFINER with those sections for which he is RESPONSIBLE.

Syntax:

<u>RESPONSIBLE-PROBLEM-DEFINER</u> IS problem-definer-name ;

Complementary Statements:

RESPONSIBLE FOR statement in PROBLEM-DEFINER section.

Usage Rules:

- Only one PROBLEM-DEFINER may be RESPONSIBLE for any section, hence, this statement may only be used once per section.

Synonyms:

RPD

Examples:

- RESPONSIBLE-PROBLEM-DEFINER IS AL-DICKEY;

- RPD A-HERSHEY;

SECURITY statement

RESOURCE-USAGE-PARAMETER section

Purpose:

To associate SECURITY keys with a section which may be used to limit access to the information given in this section. Note: The SECURITY given refers to the Problem Statement information , not the information in the target system.

Syntax:

<u>SECURITY</u> IS security-name(s) ;

Complementary Statements:

APPLIES statement in a DEFINE section for a SECURITY.

Usage Rules:

- A name may have several SECURITIES.

Synonyms:

SEC	SECURITIES

Examples:

- SECURITY IS PROJECT-MANAGER;
- SECURITIES ARE D-ORMISTON, S-MENNEL;
- SEC I-HANNON;

SEE-MEMO statement

RESOURCE-USAGE-PARAMETER section

Purpose:

To indicate that information related to this section, and possibly other sections, is contained within the documentation. The information is contained in the MEMO(S) designated herein.

Syntax:

```
SEE-MEMO memo-name(S) ;
```

Complementary Statements:

APPLIES statement in a MEMO section.

Usage Rules:

- A section may have several such statements.

Synonyms:

SM	SEE-MEMOS

Examples:

- SEE-MEMO BW-05-03-75-01;
- SEE-MEMOS: PROJ-MGR-106, PROJ-MGR-109;
- SM EPB-37, EPB-38;

SOURCE statement RESOURCE-USAGE-PARAMETER section

Purpose:

To identify information not contained within the system documentation that is relevant to the understanding of the system. The SOURCE may be a person, a document (such as a practice or guideline), etc.

Syntax:

```
     SOURCE IS source-name(s) ;
```

Complementary Statements:

APPLIES statement in DEFINE section for SOURCE name.

Usage Rules:

- A name may have several SOURCES.

Synonyms:

SRC   SOURCES

Examples:

- SOURCE IS ENG-LETTER-1-MAY-1973;
- SOURCE: SDP-3-0;

SYNONYMS statement

RESOURCE-USAGE-PARAMETER section

Purpose:

To give SYNONYMS for the name of the section. Can be used to define short forms for section-names in the documentation. Also can be used to resolve name conflicts within the system. Thus it is useful for reducing the manual effort of documentation.

Syntax:

SYNONYMS ARE synonym-name(s) ;

Complementary Statements:

DESIGNATE section.

Usage Rules:

- A name may have several SYNONYMS.

Synonyms:

SYN SYNONYM

Examples:

- SYNONYMS ARE R-11, RESOURCE-USAGE-PARAMETER-11;
- SYNONYM IS RESOURCE-USAGE-PARAMETER-11;
- SYN ALPHA;

TRACE-KEY statement RESOURCE-USAGE-PARAMETER section

Purpose:
To associate a list of trace-keys with a name so that correspondences between objects in different data bases may be made.

Syntax:

<u>TRACE-KEY</u> trace-key-name(s) ;

Complementary Statements:
APPLIES statement in DEFINE section for TRACE-KEY name.

Usage Rules:
- The names in the name list must be trace-key names.

Synonyms:

TKEY

Examples:

- TRACE-KEY module-a;

- TKEY part-1, part-2;

4.19 SET section header statement

Purpose:

To allow a detailed description of a SET. For example, this section allows the PROBLEM-DEFINER to show how ENTITIES defined within the system are collected together for information processing purposes. SETS can be defined as physical or logical views of the data as seen by the user, designer, and/or programmer.

Syntax:

<u>SET</u> set-name(s) ;

Usage Rules:

-It must be the first statement in the SET section.

-Several SETS may be defined at a time.

Synonyms:

none.

Examples:

- SET FORECAST-INFO;
- SET TRANSACTION-INFO ;

ASSERT statement SET section

Purpose:

To associate assertions about the attributes of names with other names for the purposes of consistency checking.

Syntax:

```
     ASSERT name attribute-name attribute-value

               [, name attribute-name attribute-value] ...;
```

Complementary Statements:

None.

Usage Rules:

- Name may be any type of name.

Synonyms:

ASRT

Examples:

- ASSERT data-name-1 type character;

- ASRT sine-function arguments 1,
  coord-function arguments 2;

ATTRIBUTES statement SET section

Purpose:
To specify properties or characteristics particular to a given section.

Syntax:

```
                                   { attv-name } [                  { attv-name } ]
    ATTRIBUTES ARE attr-name {             } [ ,attr-name {             } ]..
                                   {  integer  } [                  {  integer  } ]
```

Complementary Statements:
none.

Usage Rules:

-It may be used in any section.

-A name may have several ATTRIBUTES

Synonyms:

ATTR ATTRIBUTE

Examples:

- ATTRIBUTES ARE FORMAT NUMERIC, LENGTH 6;
- ATTRIBUTES ARE FREQUENCY 100, VOLUME 10;
- ATTR CHAR ZZZ9V9;

CARDINALITY statement SET section

Purpose:
To define the number of times this SET appears in the system.

Syntax:

CARDINALITY IS system-parameter ;

Complementary Statements:
None.

Usage Rules:
-A SET may have only one CARDINALITY.

Synonyms:

CARD OCCS OCCURRENCES

Examples:

- CARDINALITY IS TEN;

- CARD FORTY-SEVEN;

CLASSIFICATION statement SET section

Purpose:
To associate security CLASSIFICATION requirements with data in the target system.

Syntax:

```
CLASSIFICATION classification-name [ integer ]

               [, classification-name [ integer ]]...  ;
```

Complementary Statements:
None.

Usage Rules:
- The name must be a CLASSIFICATION name.

Synonyms:

```
CLS    CLASSIFICATIONS
```

Examples:

- CLASSIFICATION IS PERSONNEL, SEC-LEVEL 3;

- CLS RING-LEVEL 2, UPDATE;

CONSISTS statement SET section

Purpose:
To describe the combination of INPUTS, OUTPUTS, and ENTITIES which make up this SET. This implies that each instance of the SET will contain values of the INPUT, OUTPUT and ENTITY names. An INPUT, OUTPUT or ENTITY may be repeated the number of times denoted by the SYSTEM-PARAMETER.

Syntax:

```
                                          input-
CONSISTS OF [ system-parameter ]         output-name
                                          entity-

                                               input-
              [ , [ system-parameter ]         output-name ] ...  ;
                                               entity-
```

Complementary Statements:
CONTAINED statement in an ENTITY, INPUT or OUTPUT section.

Usage Rules:

-The names must be ENTITY, INPUT or OUTPUT names.

-A SET may contain several INPUTS, OUTPUTS, and ENTITIES.

Synonyms:

CSTS

Examples:

- CONSISTS OF DATA-ENTITY-1;

- CONSISTS OF: DATA-ENTITY-1, DATA-ENTITY-2;

- CSTS: ABSTRACT-1, ABSTRACT-2;

DERIVATION statement SET section

Purpose:

To express the specific system actions necessary to obtain the correct SET. This statement contains rules for DERIVATION which can be the DERIVED BY USING clause in the SET section.

Syntax:

```
DERIVATION :
        comment-entry ;
```

Complementary Statements:

None.

Usage Rules:

- See chapter 2, section 11, for the rules concerning comment entries.

Synonyms:

DRVN

Examples:

```
- DERIVATION;
    THIS SET OF INFORMATION WAS DERIVED FROM THE PAYROLL FILES TO
  THE OLD PAYSYSTEM;

  DERIVATION;

     RULES FOR ADDITION:

  ITEM MASTER-A ADDED WITH A TRANSACTION-CODE-74;
```

DERIVED statement SET section

Purpose:
To give a PROCESS that DERIVES values for the SET and the SETS, INPUTS, ENTITIES, GROUPS, and/or ELEMENTS used in the DERIVATION.

Syntax:

```
                                     [          group-         ]
                                     [         entity-         ]
     DERIVED BY  process-name(s)     [ USING      set-name(s)  ] ;
                                     [          input-         ]
                                     [        element-         ]
```

Complementary Statements:
DERIVES or USES statement in a PROCESS section and USED BY statement in a SET, INPUT, ENTITY, GROUP or ELEMENT section.

Usage Rules:
- Several PROCESSES may DERIVE values for a SET.

Synonyms:

DRVD USG

Examples:

- DERIVED BY PROCESS-A USING INPUT-1;

- DERIVED BY PROCESS-1 USING ENTITY-A, ENTITY-B;

- DRVD PROCESS-0 USG INPUT-1;

- DRVD PROCESS-NAME USG ENTITY-A, GROUP-B;

DESCRIPTION statement SET section

Purpose:

To give a text DESCRIPTION of the section being described, and to state any information which cannot be easily or accurately stated with the syntax applicable for a given section.

Syntax:

```
    DESCRIPTION ;
            comment-entry ;
```

Complementary Statements:

None.

Usage Rules:

- See chapter 2, section 10, for the rules concerning comment entries.

Synonyms:

DESC

Examples:

```
    DESCRIPTION;
       THIS ALLOWS YOU TO DESCRIBE IN NARRATIVE FORM WHAT YOU EXPECT
    THIS SECTION TO DO;

    DESC;
       ANY RELEVANT INFORMATION GOES HERE;
```

KEYWORDS statement SET section

Purpose:

To selectively retrieve information from the URA data-base. A collection of information may be marked with a unique identifier (KEY) and later retrieved.

Syntax:

```
KEYWORDS ARE keyword-name(s) ;
```

Complementary Statements:

APPLIES statement in DEFINE section for a keyword.

Usage Rules:

-A section may have several KEYWORDS

Synonyms:

KEY KEYWORD

Examples:

- KEYWORD IS PAYROLL;

- KEY IS CON-C1;

- KEYWORDS ARE EMP, EMPL, EMPLOYEE;

RESPONSIBLE-PROBLEM-DEFINER statement SET section

Purpose:
To associate the PROBLEM-DEFINER with those sections for which he is RESPONSIBLE.

Syntax:

```
RESPONSIBLE-PROBLEM-DEFINER IS problem-definer-name ;
```

Complementary Statements:
RESPONSIBLE FOR statement in PROBLEM-DEFINER section.

Usage Rules:

- It may be used in any section except the PROBLEM-DEFINER section.

- Only one PROBLEM-DEFINER may be RESPONSIBLE for any section, hence, this statement may only be used once per section.

Synonyms:

RPD

Examples:

- RESPONSIBLE-PROBLEM-DEFINER IS AL-DICKEY;

- RPD A-HERSHEY;

RESPONSIBLE-INTERFACE statement SET section

Purpose:
To give the INTERFACE which is responsible for this SET.

Syntax:

RESPONSIBLE-INTERFACE IS interface-name(s) ;

Complementary Statements:
RESPONSIBLE FOR in the INTERFACE section.

Usage Rules:

- The names must be INTERFACE names.

Synonyms:

RINT

Examples:

- RESPONSIBLE-INTERFACE IS PAYROLL-SYSTEM;

- RINT: ENGINEERING-DEPT;

SECURITY statement SET section

Purpose:

To associate SECURITY keys with a section which may be used to limit access to the information given in this section. Note: The SECURITY given refers to the Problem Statement information , not the information in the target system.

Syntax:

SECURITY IS security-name(s) ;

Complementary Statements:

APPLIES statement in a DEFINE section for a SECURITY.

Usage Rules:

- A name may have several SECURITIES.

Synonyms:

SEC SECURITIES

Examples:

- SECURITY IS PROJECT-MANAGER;
- SECURITIES ARE D-ORMISTON, S-MENNEL;
- SEC L-HANNON;

SEE-MEMO statement SET section

Purpose:
To indicate that information related to this section, and possibly other sections, is contained within the documentation. The information is contained in the MEMO(S) designated herein.

Syntax:

<u>SEE-MEMO</u> memo-name(s) ;

Complementary Statements:
APPLIES statement in a MEMO section.

Usage Rules:

- A section may have several such statements.

Synonyms:

SM SEE-MEMOS

Examples:

- SEE-MEMO RW-05-03-75-01;

- SEE-MEMOS: PROJ-MGR-106, PROJ-MGR-109;

- SM EPB-37, EPB-39;

SOURCE statement SET section

Purpose:
To identify information not contained within the system documentation that is relevant to the understanding of the system. The SOURCE may be a person, a document (such as a practice or guideline), etc.

Syntax:

<u>SOURCE</u> IS source-name(s) ;

Complementary Statements:
APPLIES statement in DEFINE section for SOURCE name.

Usage Rules:

- A name may have several SOURCES.

Synonyms:

SRC SOURCES

Examples:

- SOURCE IS ENG-LETTER-1-MAY-1973;
- SOURCE: SDP-3-0;
- SOURCES ARE SDP-3-1,SDP-3-2,MEMO-23-MAY-1974;

SUBSET statement SET section

Purpose:
To show the structural relationship of this SET to higher-level SET(S). This statement can be used to express a top-down or bottom-up view of the system.

Syntax:

```
SUBSET OF set-name(s) ;
```

Complementary Statements:
SUBSETS statement in SET section.

Usage Rules:

-The names in name(s) must be SET names.

-A SET may be a SUBSET of several other SETS.

Synonyms:

SST

Examples:

- SUBSET OF SET-GROUP-BANKS, SET-GROUP-CKTS;

- SST: STUDENT-INFO, COURSE-INFO;

SUBSETS statement SET section

Purpose:
To show the structural relationship of this SET to lower-level SET(S). This statement can be used to express a top-down or bottom-up view of the system.

Syntax:

SUBSETS ARE set-name(s) ;

Complementary Statements:
SUBSET statement in a SET section.

Usage Rules:
-The names must be SET names.

-Many SETS may be SUBSETS to one SET.

Synonyms:

SSTS

Examples:

- SUBSETS ARE SET-GROUP-BANKS, SET-GROUP-CKTS;

- SSTS: STUDENT-INFO, COURSE-INFO;

SUBSETTING-CRITERIA statement SET section

Purpose:
To indicate what data and/or rules are to be used to extract a portion of the data from the SET.

Syntax:

```
                          group-
SUBSETTING-CRITERIA ARE element-name(s) ;
                      subsetting-criterion-
```

Complementary Statements:
APPLIES statement in DEFINE section for SUBSETTING-CRITERION, and SUBSETTING-CRITERION statement in ELEMENT and GROUP sections.

Usage Rules:

- The names must be either ELEMENT or GROUP names.

- If the SUBSETTING-CRITERIA is an ELEMENT or a GROUP then it must be part of the ENTITY which is a legal member of this SET.

- A SET may have more than one SUBSETTING-CRITERIA.

- If a GROUP is given for the SUBSETTING-CRITERIA then the ELEMENTS which make up the GROUP taken together form the SUBSETTING-CRITERIA.

Synonyms:

SSCA

Examples:

- SUBSETTING-CRITERIA ARE GROUP-BANKS, GROUP-CKTS;

- SSCA: GROUP-107, GROUP-108;

SYNONYMS statement SET section

Purpose:

To give SYNONYMS for the name of the section. Can be used to define short forms for section-names in the documentation. Also can be used to resolve name conflicts within the system. Thus it is useful for reducing the manual effort of documentation.

Syntax:

```
SYNONYMS ARE synonym-name(s) ;
```

Complementary Statements:

DESIGNATE section.

Usage Rules:

- The statement may be used in any section except a MEMO section, or a DEFINE section for a SYNONYM.

- A name may have several SYNONYMS.

Synonyms:

SYN SYNONYM

Examples:

- SYNONYMS ARE S-11, SET-11;

- SYNONYM IS SET-11;

- SYN ALPHA;

TRACE-KEY statement SET section

Purpose:

To associate a list of trace-keys with a name so that correspondences between objects in different data bases may be made.

Syntax:

```
TRACE-KEY trace-key-name(s) ;
```

Complementary Statements:

APPLIES statement in DEFINE section for TRACE-KEY name.

Usage Rules:

- The names in the name list must be trace-key names.

Synonyms:

TKEY

Examples:

- TRACE-KEY module-a;
- TKEY part-1, part-2;

UPDATED statment SET section

Purpose:
To indicate those PROCESSES which UPDATE this SET, and optionally, to specify the data used to do the UPDATING.

Syntax:

```
                                      [        group-         ]
                                      [        entity-        ]
    UPDATED BY  process-name(s)  [ USING  element-   name(s) ] ;
                                      [        input-         ]
                                      [        set-           ]
```

Complementary Statements:
UPDATES or USES statement in PROCESS section and USED BY statement in INPUT, SET, ENTITY, GROUP or ELEMENT sections.

Usage Rules:
-A SET may be UPDATED by several different PROCESSES.

Synonyms:

UPDD USG

Examples:

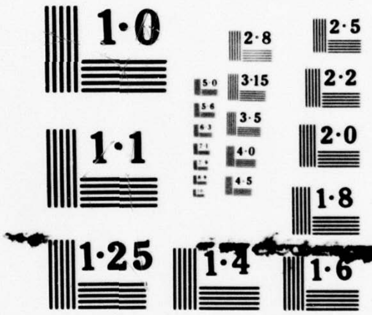
- UPDATED BY INPUT-PROCESS;

- UPDD PROC-1, PROC-2,PROC-789;

AD-A055 505 MICHIGAN UNIV ANN ARBOR DEPT OF INDUSTRIAL AND OPERA--ETC F/G 9/2
USER REQUIREMENTS LANGUAGE (URL) USER'S MANUAL. PART II. (REFER--ETC(U)
MAR 77 F19628-76-C-0197
UNCLASSIFIED ESD-TR-78-127-VOL-2 NL

5 OF 5
ADA
055505

END
DATE
FILMED
8 -78
DDC


1·0
2·8
2·5
5·0
5·6
3·15
2·2
3·5
1·1
2·0
4·0
4·5
1·8
1·25
1·4
1·6

USED statement SET section

Purpose:

To indicate the PROCESS(ES) that USE(D) this SET, and optionally, DERIVE(S) OUTPUTS or UPDATE(S) SETS, ENTITIES, GROUPS.

Syntax:

```
                             [                 set-           ]
                             [    { DERIVE }  *output-        ]
USED BY process-name(s)      [ TO {        }   entity-  name(s) ] ;
                             [    { UPDATE }   group-         ]
                             [                 element-       ]
```

* Output-name(s) may only be used with the DERIVE clause.

Complementary Statements:

USES, UPDATES or DERIVES statement in a PROCESS section and DERIVED or UPDATED statement in SET, ENTITY, GROUP or ELEMENT sections.

Usage Rules:

-Several PROCESSES may use a SET

Synonyms:

DRV UPD

Examples:

- USED BY PROCESS-INTEGER;

- USED BY PROC-MU-A101, PROC-MU-A102 TO DERIVE OUTPUT-1;

VOLATILITY-MEMBER statement SET section

Purpose:
To give a measure of the changability of the contents of the SET.

Syntax:

```
VOLATILITY-MEMBER ;
        comment-entry ;
```

Complementary Statements:
None.

Usage Rules:
-Only one VOLATILITY-MEMBER statement may be given for any SET.

Synonyms:

VOLM

Examples:

```
- VOLATILITY-MEMBER;
    ALL THE ENTITIES ARE ACCESSED AT LEAST ONCE A WEEK;
```

VOLATILITY-SET statement SET section

Purpose:
To give a measure of the changability of the SET.

Syntax:

```
VOLATILITY-SET ;
        comment-entry ;
```

Complementary Statements:
None.

Usage Rules:
-Only one VOLATILITY-SET statement may be given for any SET.

Synonyms:

VOLS

Examples:

```
- VOLATILITY-SET;
    THIS SET WILL BE UPDATED TWICE DAILY ;
```

4.20 UNIT section header statement

Purpose:

To allow a detailed description of a UNIT. A UNIT is something that is used in measuring a RESOURCE. It is used in recording and estimating the resource consumption in the target system.

Syntax:

<u>UNIT</u> name(s);

Usage Rules:

- It must be the first statement in a UNIT section.
- Several UNITS may be defined at once.

Synonyms:

None

Examples:

- UNIT MILLI-SECOND, DOLLAR;
- UNIT MAN-HOURS;

ASSERT statement UNIT section

Purpose:

To associate assertions about the attributes of names with other names for the purposes of consistency checking.

Syntax:

```
ASSERT name attribute-name attribute-value
                    [, name attribute-name attribute-value] ...;
```

Complementary Statements:

None.

Usage Rules:

- Name may be any type of name.

Synonyms:

ASRT

Examples:

```
- ASSERT data-name-1 type character;

- ASRT sine-function arguments 1,
         coord-function arguments 2;
```

ATTRIBUTES statement UNIT section

Purpose:
To specify properties or characteristics particular to a given section.

Syntax:

```
                                { attv-name } [                { attv-name } ]
ATTRIBUTES ARE attr-name {             } [ ,attr-name {             } ]...
                                {  integer  } [                {  integer  } ]
```

Complementary Statements:
none.

Usage Rules:

-A name may have several ATTRIBUTES

Synonyms:

ATTR ATTRIBUTE

Examples:

- ATTRIBUTES ARE FORMAT NUMERIC, LENGTH 6;

- ATTRIBUTES ARE FREQUENCY 100, VOLUME 10;

- ATTR CHAR ZZZ9V9;

DESCRIPTION statement UNIT section

Purpose:

To give a text DESCRIPTION of the section being described, and to state any information which cannot be easily or accurately stated with the syntax applicable for a given section.

Syntax:

```
DESCRIPTION ;
        comment-entry ;
```

Complementary Statements:

None.

Usage Rules:

- See chapter 2, section 10, for the rules concerning comment entries.

Synonyms:

DESC

Examples:

```
DESCRIPTION;
   THIS ALLOWS YOU TO DESCRIBE IN NARRATIVE FORM WHAT YOU EXPECT
THIS SECTION TO DO;

DESC;
   ANY RELEVANT INFORMATION GOES HERE;
```

KEYWORDS statement UNIT section

Purpose:
To selectively retrieve information from the URA data-base. A collection of information may be marked with a unique identifier (KEY) and later retrieved.

Syntax:

<u>KEYWORDS</u> ARE keyword-name(s) ;

Complementary Statements:
APPLIES statement in DEFINE section for a keyword.

Usage Rules:

-A section may have several KEYWORDS

Synonyms:

KEY KEYWORD

Examples:

- KEYWORD IS PAYROLL;

- KEY IS CON-C1;

- KEYWORDS ARE EMP, EMPL, EMPLOYEE;

MEASURES statement UNIT section

Purpose:
To give the RESOURCE names that the UNIT is used to measure.

Syntax:

```
MEASURES resource-name(s) ;
```

Complementary Statements:
MEASURED statement in RESOURCE section.

Usage Rules:
- A UNIT may measure several RESOURCES. A RESOURCE, however, may be measured only in one UNIT.

Synonyms:

MSRS

Examples:

- MEASURES CPU-TIME, REAL-TIME;

- MSRS FUNDS;

RESPONSIBLE-PROBLEM-DEFINER statement UNIT section

Purpose:
To associate the PROBLEM-DEFINER with those sections for which he is RESPONSIBLE.

Syntax:

<u>RESPONSIBLE-PROBLEM-DEFINER</u> IS problem-definer-name ;

Complementary Statements:
RESPONSIBLE FOR statement in PROBLEM-DEFINER section.

Usage Rules:

- Only one PROBLEM-DEFINER may be RESPONSIBLE for any section, hence, this statement may only be used once per section.

Synonyms:

RPD

Examples:

- RESPONSIBLE-PROBLEM-DEFINER IS AL-DICKEY;

- RPD A-HERSHEY;

SECURITY statement UNIT section

Purpose:

To associate SECURITY keys with a section which may be used to limit access to the information given in this section. Note: The SECURITY given refers to the Problem Statement information , not the information in the target system.

Syntax:

<u>SECURITY</u> IS security-name(s) ;

Complementary Statements:

APPLIES statement in a DEFINE section for a SECURITY.

Usage Rules:

- A name may have several SECURITIES.

Synonyms:

SEC SECURITIES

Examples:

- SECURITY IS PROJECT-MANAGER;
- SECURITIES ARE D-ORMISTON, S-MENNEL;
- SEC L-HANNON;

SEE-MEMO statement UNIT section

Purpose:
To indicate that information related to this section, and possibly other sections, is contained within the documentation. The information is contained in the MEMO(S) designated herein.

Syntax:

SEE-MEMO memo-name(s) ;

Complementary Statements:
APPLIES statement in a MEMO section.

Usage Rules:

- A section may have several such statements.

Synonyms:

SM SEE-MEMOS

Examples:

- SEE-MEMO BW-05-03-75-01;

- SEE-MEMOS: PROJ-MGR-106, PROJ-MGR-109;

- SM EPR-37, EPR-38;

SOURCE statement UNIT section

Purpose:

To identify information not contained within the system documentation that is relevant to the understanding of the system. The SOURCE may be a person, a document (such as a practice or guideline), etc.

Syntax:

```
SOURCE IS source-name(s) ;
```

Complementary Statements:

APPLIES statement in DEFINE section for SOURCE name.

Usage Rules:

- A name may have several SOURCES.

Synonyms:

SRC   SOURCES

Examples:

- SOURCE IS ENG-LETTER-1-MAY-1973;
- SOURCE: SDP-3-2;

SYNONYMS statement UNIT section

Purpose:

To give SYNONYMS for the name of the section. Can be used to define short forms for section-names in the documentation. Also can be used to resolve name conflicts within the system. Thus it is useful for reducing the manual effort of documentation.

Syntax:

SYNONYMS ARE synonym-name(s) ;

Complementary Statements:

DESIGNATE section.

Usage Rules:

- A name may have several SYNONYMS.

Synonyms:

SYN	SYNONYM

Examples:

- SYNONYMS ARE U-11, UNIT-11;
- SYNONYM IS UNIT-11;
- SYN ALPHA;

TRACE-KEY statement UNIT section

Purpose:

To associate a list of trace-keys with a name so that correspondences between objects in different data bases may be made.

Syntax:

TRACE-KEY trace-key-name(s) ;

Complementary Statements:

APPLIES statement in DEFINE section for TRACE-KEY name.

Usage Rules:

- The names in the name list must be trace-key names.

Synonyms:

TKEY

Examples:

- TRACE-KEY module-a;
- TKEY part-1, part-2;

APPENDIX A

Implementation Restrictions

A user defined name can have a maximum length of 30 characters (letters, digits, dashes).

The User Requirements Analyzer (URA) will ignore card columns 73 through 80 (if card input is used). Thus, only columns 1 through 72 can be used for URL statements.

Each URL input line can contain either part of a URL statement or several statements.

Any URL statement may be broken anywhere a blank is allowed.

APPENDIX B

URL Reserved Words

A
AN
AND
APP
APPLIES
ARE
AS
ASOC
ASOD
ASRT
ASSERT
ASSOCIATED
ASSOCIATED-DATA
AT
ATTR
ATTRIBUTE
ATTRIBUTES
ATTRIBUTE-VALUE
ATTV
BEC
BECG
BECOMES
BECOMING
BECS
BEING
BETWEEN
BOX
BTWN
BY
CAL
CALLED
CARD
CARDINALITY
CAUSED
CAUSES
CLASSIFICATION
CLASSIFICATIONS
CLS
CNSC
CNSD
CNTD
COND
CONDITION
CONDITIONS
CONN
CONNECTIVITY
CONSISTS
CONSUMED
CONSUMES
CONTAINED
CSD

CSS
CSTS
DEF
DEFINE
DERIVATION
DERIVED
DERIVES
DESC
DESCRIPTION
DESG
DESIGNATE
DRV
DRVD
DRVN
DRVS
ELE
ELEMENT
ELEMENTS
ENT
ENTITIES
ENTITY
EV
EVENT
EVENTS
EVT
F
FALSE
FOR
FROM
GEND
GENERATED
GENERATES
GENS
GP
GROUP
GROUPS
HAP
HAPPENS
IDD
IDENTIFIED
IDENTIFIES
IDS
IN
INCC
INCEPTION
INCEPTION-CAUSES
INCP
INP
INPUT
INPUTS
INTD
INTERFACE
INTERFACES
INTERRUPTED
INTERRUPTS
INTERVAL

```
INTERVALS
INTE
INTS
IS
IT
KEY
KEYWORD
KEYWORDS
MADE
MAILBOX
MAILBOXES
MAINTAINED
MAINTAINS
MAK
MAKES
MBX
MEASURED
MEASURES
MEMO
MEMOS
MSRD
MSRS
MTND
MTNS
NEGINF
OCCS
OCCURRENCES
OF
ON
ORGANIZATIONAL-UNIT
ORGU
OUT
OUTPUT
OUTPUTS
PART
PD
PER
PERFORMED
PERFORMS
PFMD
PFMS
POSING
PRC
PRCD
PRCR
PRD
PROBLEM-DEFINER
PROBLEM-DEFINERS
PROC
PROCEDURE
PROCESS
PROCESSES
PROCESSOR
PROCESSORS
PROCR
RCVD
```

```
RCVS
REAL-WOLRD-ENTITIES
REAL-WOLRD-ENTITY
RECEIVED
RECEIVES
REL
RELATED
RELATION
RELATIONS
RES
RESOURCE
RESOURCE-USAGE
RESOURCE-USAGE-PARAMETER
RESOURCE-USAGE-PARAMETER-VALUE
RESP
RESPONSIBLE
RESPONSIBLE-INTERFACE
RESPONSIBLE-PROBLEM-DEFINER
RINT
RLN
RPD
RLVF
RSC
RU
RUP
RUPV
RUP-VALUE
RWE
SEC
SECURITIES
SECURITY
SAR
SECURITY-ACCESS-RIGHT
SECURITY-ACCESS-RIGHTS
SEE-MEMO
SEE-MEMOS
SET
SETS
SM
SOURCE
SOURCES
SRC
SSCA
SSCN
SSI
SSTS
SUBP
SUBPARTS
SUBSET
SUBSETS
SUBSETTING-CRITERIA
SUBSETTING-CRITERION
SYN
SYNONYM
SYNONYMS
SYSP
```

```
SYSPAR
SYSTEM-PARAMETER
SYSTEM-PARAMETERS
T
TERC
TERM
TERMINATED
TERMINATES
TERMINATION
TERMINATION-CAUSES
THE
THIS
THRU
THRU
TIMES-REF
TIMR
TKEY
TO
TRACE-KEY
TRGD
TRGS
TRIGGERED
TRIGGERS
TRMD
TRMS
TRUE
UNIT
UPDATE
UPDATED
UPD
UPDATES
UPDD
UPDS
USED
USES
USG
USING
UTLD
UTLS
UTILIZED
UTILIZES
VAL
VALUE
VALUES
VIA
VOL
VOLATILITY
VOLATILITY-MEMBER
VOLATILITY-SET
VOLM
VOLS
WHEN
WHETHER
WHILE
WHL
WITH
```

APPENDIX C

URL Optional Words

A
AN
AND
ARE
AS
AT
BEING
BY
FOR
FROM
IN
IS
IT
OF
ON
THE
THIS
TO
WHETHER
WITH

APPENDIX D

Reserved Words with Synonyms

APPLIES	APP
ASSERT	ASRT
ASSOCIATED	ASOC
ASSOCIATED-DATA	ASOD
ATTRIBUTE	ATTRIBUTES ATTR
ATTRIBUTE-VALUE	ATTV
BECOMES	BECS
BECOMING	BEC BECG
BETWEEN	BTWN
CALLED	CAL
CARDINALITY	CARD OCCS OCCURRENCES
CAUSED	CSD
CAUSES	CSS
CLASSIFICATION	CLASSIFICATIONS CLS
CONDITION	COND CONDITIONS
CONNECTIVITY	CONN
CONSISTS	CSTS
CONSUMED	CNSD
CONSUMES	CNSS
CONTAINED	CNTD
DEFINE	DEF
DERIVATION	DRVN
DERIVE	DRV
DERIVED	DRVD
DERIVES	DRVS
DESCRIPTION	DESC
DESIGNATE	DESG
ELEMENT	ELE ELEMENTS
ENTITY	ENT ENTITIES
EVENT	EV EVT EVENTS
FALSE	F
GENERATED	GEND
GENERATES	GENS
GROUP	GR GROUPS
HAPPENS	HAP
IDENTIFIED	IDD
IDENTIFIES	IDS
INCEPTION	INCP
INCEPTION-CAUSES	INCC
INPUT	INP INPUTS
INTERFACE	INTF INTERFACES ORGANIZATIONAL-UNIT ORGU RWE REAL-WORLD-ENTITY
INTERRUPTED	INTD
INTERRUPTS	INTS
INTERVAL	INT INTERVALS
KEYWORD	KEY KEYWORDS
MADE	
MAILBOX	BOX MBX MAILBOXES
MAINTAINED	MTND
MAINTAINS	MTNS
MAKES	MAK
MEASURED	MSRD
MEASURES	MSRS
MEMO	MEMOS

APPENDIX D

Reserved Words with Synonyms

NEGINF	
OUTPUT	OUT OUTPUTS
PART	
PER	
PERFORMED	PFMD
PERFORMS	PFMS
POSINF	
PROBLEM-DEFINER	PD PROBLEM-DEFINERS
PROCEDURE	PRCD PRD
PROCESS	PROC PRC PROCESSES
PROCESSOR	PRCR PROCR PROCESSORS
RECEIVED	RCVD
RECEIVES	RCVS
RELATED	REL
RELATION	RLN RELATIONS
RESOURCE	RSC
RESOURCE-USAGE	RU
RESOURCE-USAGE-PARAMETER	RUP
RESOURCE-USAGE-PARAMETER-VALUE	RUPV RUP-VALUE
RESPONSIBLE	RESP RES
RESPONSIBLE-INTERFACE	RINT
RESPONSIBLE-PROBLEM-DEFINER	RPD
SECURITY	SEC SECURITIES
SECURITY-ACCESS-RIGHT	SAR SECURITY-ACCESS-RIGHTS
SEE-MEMO	SM SEE-MEMOS
SET	SETS
SOURCE	SRC SOURCES
SUBPARTS	SUBP
SUBSET	SST
SUBSETS	SSTS
SUBSETTING-CRITERIA	SSCA
SUBSETTING-CRITERION	SSCN
SYNONYM	SYN SYNONYMS
SYSTEM-PARAMETER	SYSP SYSPAR SYSTEM-PARAMETERS
TERMINATED	TRMD
TERMINATES	TRMS
TERMINATION	TERM
TERMINATION-CAUSES	TERC
TIMES-PER	TIMP
TRACE-KEY	TKEY
TRIGGERED	TRGD
TRIGGERS	TRGS
TRUE	T
UNIT	
UPDATE	UPD
UPDATED	UPDD
UPDATES	UPDS
USED	
USES	
USING	USG
UTILIZED	UTLD
UTILIZES	UTLS
VALUES	VAL VALUE

APPENDIX D

Reserved Words with Synonyms

VOLATILITY	VOL
VOLATILITY-MEMBER	VOLM
VOLATILITY-SET	VOLS
WHILE	WHL

APPENDIX E

Name Types

ATTRIBUTE
ATTRIBUTE-VALUE
CLASSIFICATION
CONDITION
ELEMENT
ENTITY
EVENT
GROUP
INPUT
INTERFACE
INTERVAL
KEYWORD
MAILBOX
MEMO
OUTPUT
PROBLEM-DEFINER
PROCESS
PROCESSOR
RELATION
RESOURCE
RESOURCE-USAGE-PARAMETER
SECURITY
SOURCE
SET
SUBSETTING-CRITERION
SYSTEM-PARAMETER
TRACE-KEY
UNIT

APPENDIX F

Section Types

CONDITION
DEFINE
DESIGNATE
ELEMENT
ENTITY
EVENT
GROUP
INPUT
INTERFACE
INTERVAL
MEMO
OUTPUT
PROBLEM-DEFINER
PROCESS
PROCESSOR
RELATION
RESOURCE
RESOURCE-USAGE-PARAMETER
SET
UNIT

APPENDIX G

URL Forms

The following hard-copy forms are intended to aid the user in writing URL accroding to the specifications given in the URL Reference Manual. The forms for a section give all statements allowed in that section and thus help the user to keep all possibilities in mind while writing his requirements. They also simplify the keypunching process.

CODING INSTRUCTIONS

The following general comments apply to the forms for all section types:

1. All statements are optional; the user should make use of only those he requires.

2. A continuation form is furnished for those statements which are too long for the space provided. To use this, the problem-definer should first state the section type and name at the top of the page, then, below, express the continuations as complete statements. (The abbreviations from Appendix D of the URL Reference Manual may be used for statement names.) A name-list should be broken only at the end of a name.

   DESIGNATE statements, of the form:

DESIGNATE name AS A SYNONYM FOR name [, name AS A SYNONYM FOR name]...;

should be entered on continuation forms.

KEYPUNCHING INSTRUCTIONS

A statement should be keypunched only if it contains material coded by the user. For most statements, one may recognize the end of the statement by the semi-colon which is to be punched after it. The only exceptions to this rule are the comment-entry statements (DESCRIPTION, TRUE-WHILE, FALSE-WHILE, VOLATILITY, VOLATILITY-SET, VOLATILITY-MEMBER, DERIVATION, and PROCEDURE) which have two parts, each followed by a semi-colon. The first part consists of the printed statement name, while the second part contains only user-defined material. Both parts of a comment-entry statement should be keypunched if any coding appears in the second part of the statement. Otherwise, neither part of the statement should be punched.

Form titles, system name, dates and page numbers are not to be keypunched.

Columns 73-80 of each card will be ignored and therefore should not be used for URL statements. A URL statement may be punched on more than one card, and may be broken anywhere a blank is allowed.

URL DEFINITION FORM

------------------------ ------------ PAGE ___ OF ___
system name date

DEFINE --;
(name)

□ ATTRIBUTE;

□ ATTRIBUTE-VALUE;

□ CLASSIFICATION;

□ KEYWORD;

□ MAILBOX;

□ SECURITY;

□ SOURCE;

□ SUBSETTING-CRITERION;

□ SYSTEM-PARAMETER;

□ TRACE-KEY;

APPLIES TO --;
(list of appropriate names)
(only for keyword, mailbox, security, source and trace-key)

ASSERT --;
(list of names followed by attribute-names
and attribute-values)

ATTRIBUTES ARE ------------------------ ------------------------,
(attribute name) (attribute value)

------------------------ ------------------------,

------------------------ ------------------------;

DESCRIPTION;

--;
(narrative description)

KEYWORDS --;
(list of keywords)

URL DEFINITION FORM (Page 2)

PAGE __ OF __

------------------------   ----------
system name   date

MAINTAINED BY --;
(list of process names)
(only for subsetting-criterion)

RESPONSIBLE-PROBLEM-DEFINER ------------------------------;
(name of responsible problem definer)

SECURITY --;
(list of applicable security names)

SEE-MEMO --;
(list of memo names)

SOURCE ---;
(list of sources of information)

SUBSETTING-CRITERION FOR ------------------------------;
(list of set names)
(only for subsetting-criterion)

SYNONYMS ---;
(list of synonyms)

TRACE-KEY --;
(list of trace-key names)

VALUE --;
(value)
(only for system-parameter)

VALUES ---
(minimum value)
(only for system-parameter)
(may be used only if the VALUE statement is not used)

THRU ---;
(maximum value)
(only for system-parameter)
(may be used only if the VALUE statement is not used)

URL CONDITION DEFINITION FORM

PAGE ___ OF ___

______________________ ___________
system name date

CONDITION ____________________________________;
(condition name)

ASSERT ____;
(list of names followed by attribute-names
and attribute-values)

ATTRIBUTES ARE ______________________ ______________________,
(attribute name) (attribute value)

______________________ ______________________,

______________________ ______________________;

BECOMING TRUE CAUSES ______________________________________;
(list of event names)

BECOMING FALSE CAUSES ______________________________________;
(list of event names)

BECOMING TRUE INTERRUPTS ______________________________________;
(list of process names)

BECOMING FALSE INTERRUPTS ______________________________________;
(list of process names)

BECOMING TRUE TERMINATES ______________________________________;
(list of process names)

BECOMING FALSE TERMINATES ______________________________________;
(list of process names)

BECOMING TRUE TRIGGERS ______________________________________;
(list of process names)

BECOMING FALSE TRIGGERS ______________________________________;
(list of process names)

DESCRIPTION;

____

____

____;
(narrative description)

URL CONDITION DEFINITION FORM (Page 2)

________________________ ___________ PAGE ___ OF ___
system name date

KEYWORDS ____;
(list of keywords)

MADE TRUE BY ____;
(list of event, input, and process names)

MADE FALSE BY ____;
(list of event, input, and process names)

RESPONSIBLE-PROBLEM-DEFINER ______________________________;
(name of responsible problem definer)

SECURITY ____;
(list of applicable security names)

SEE-MEMO ____;
(list of memo names)

SOURCE ____;
(list of sources of information)

SYNONYMS ____;
(list of synonyms)

TRACE-KEY ____;
(list of trace-key names)

TRUE WHILE;

____;
(comment-entry)

FALSE WHILE;

____;
(comment-entry)

URL ELEMENT DEFINITION FORM

---------------------- ----------- PAGE ___ OF ___
system name date

ELEMENT ----------------------------------;
(name of element)

ASSERT --;
(list of names followed by attribute-names
and attribute-values)

ASSOCIATED WITH --;
(list of relation names)

ATTRIBUTES ARE --------------------- ---------------------,
(attribute name) (attribute value)

--------------------- ---------------------,

--------------------- ---------------------;

CLASSIFICATION --;
(list of classification names
optionally followed by classification levels)

CONTAINED IN ---;
(list of group, entity, input and output names)

DERIVED BY --;
(list of process names)

USING --;
(list of input, entity, set, group and element names)

DERIVED BY --;
(list of process names)

DESCRIPTION;

--;
(narrative description)

IDENTIFIES --;
(list of entity names)

KEYWORDS --;
(list of keywords)

RESPONSIBLE-PROBLEM-DEFINER ---------------------------;
(name of responsible problem definer)

SECURITY --;
(list of applicable security names)

URL ELEMENT DEFINITION FORM (Page 2)

________________ system name ________ date PAGE ___ OF ___

SEE-MEMO ________________ (list of memo names) ;

SOURCE ________________ (list of sources of information) ;

SUBSETTING-CRITERION FOR ________________ (list of set names) ;

SYNONYMS ________________ (list of synonyms) ;

TRACE-KEY ________________ (list of trace-key names) ;

UPDATED BY ________________ (list of process names)

USING ________________ (list of input, set, entity, group and element names) ;

UPDATED BY ________________ (list of process names) ;

USED BY ________________ (list of process names)

TO DERIVE ________________ (list of set, entity, group, element and output names) ;

USED BY ________________ (list of process names)

TO UPDATE ________________ (list of set, entity, group and element names) ;

USED BY ________________ (list of process names) ;

VALUE ________________ (value) ;

VALUES ________________ (minimum value) THRU ________________ (maximum value) ;
(may be used only if the VALUE statement is not used)

URL ENTITY DEFINITION FORM

---------------------- ------------ PAGE ___ OF ___
system name date

ENTITY ------------------------------------;
(name of entity)

ASSERT ---;
(list of names followed by attribute-names
and attribute-values)

ATTRIBUTES ARE ---------------------- ----------------------,
(attribute name) (attribute value)

---------------------- ----------------------;

CARDINALITY IS ---;
(system-parameter)

CLASSIFICATION ---;
(list of classification names
optionally followed by classification levels)

CONSISTS OF ---;
(list of group and element names,
optionally preceded by system-parameters)

CONTAINED IN --;
(list of set names)

DERIVED BY --
(list of process names)

USING ---;
(list of input, set, entity, group and element names)

DERIVED BY --;
(list of process names)

DESCRIPTION;

---;
(narrative description)

IDENTIFIED BY ---;
(list of group and element names)

KEYWORDS --;
(list of keywords)

RELATED TO --
(entity name)

VIA ---;
(relation name)

URL ENTITY DEFINITION FORM (Page 2)

________________________ ___________ PAGE ___ OF ___
system name date

RESPONSIBLE-PROBLEM-DEFINER ______________________________;
(name of responsible problem definer)

SECURITY ______________________________;
(list of applicable security names)

SEE-MEMO ______________________________;
(list of memo names)

SOURCE ______________________________;
(list of sources of information)

SYNONYMS ______________________________;
(list of synonyms)

TRACE-KEY ______________________________;
(list of trace-key names)

UPDATED BY ______________________________
(list of process names)

USING ______________________________;
(list of input, set, entity, group, or element names)

UPDATED BY ______________________________;
(list of process names)

USED BY ______________________________
(list of process names)

TO DERIVE ______________________________;
(list of set, entity, group, element, and output names)

USED BY ______________________________;
(list of process names)

TO UPDATE ______________________________;
(list of set, entity, group and element names)

USED BY ______________________________
(list of process names)

VOLATILITY;

____

______________________________;
(comment-entry: changeability of the entity)

URL EVENT DEFINITION FORM

```
                                                        PAGE ___ OF ___
------------------------     -----------
    system name                 date

        EVENT   ----------------------------------------;
                        (name of event)

ASSERT  ------------------------------------------------------------;
           (list of names followed by attribute-names
                     and attribute-values)

ATTRIBUTES ARE   ----------------------   ------------------------,
                   (attribute name)          (attribute value)

                 ----------------------   ------------------------,

                 ----------------------   ------------------------;

CAUSED BY  --------------------------------------------------------;
                     (list of event and input names)

CAUSED WHEN  ------------------------------------   BECOMES TRUE;
                   (name of condition)

CAUSED WHEN  ------------------------------------  BECOMES FALSE;
                   (name of condition)

CAUSES  -----------------------------------------------------------;
                       (list of event names)

DESCRIPTION;

      -------------------------------------------------------------

      -------------------------------------------------------------

      -------------------------------------------------------------;
              (narrative description)

HAPPENS  ----------------  TIMES-PER  -------------------------;
         (system-parameter)                 (interval name)

ON INCEPTION OF  --------------------------------------------------;
                          (list of process names)

INTERRUPTS  -------------------------------------------------------;
                         (list of process names)

KEYWORDS  ---------------------------------------------------------;
                         (list of keywords)

MAKES  ------------------------------------------------------  TRUE;
                 (list of condition names)
```

URL EVENT DEFINITION FORM (Page 2)

------------------------ ---------- PAGE ___ OF ___
system name date

MAKES -- FALSE;
(list of condition names)

RESPONSIBLE-PROBLEM-DEFINER ------------------------------------;
(name of responsible problem definer)

SECURITY ---;
(list of applicable security names)

SEE-MEMO ---;
(list of memo names)

SOURCE ---;
(list of sources of information)

SYNONYMS ---;
(list of synonyms)

TERMINATES ---;
(list of process names)

ON TERMINATION OF --;
(list of process names)

TRACE-KEY --;
(list of trace-key names)

TRIGGERS ---;
(list of process names)

URL GROUP DEFINITION FORM

PAGE ___ OF ___

________________________ system name   ___________ date

GROUP ______________________________________;
(name of group)

ASSERT ______________________________________;
(list of names followed by attribute-names
and attribute-values)

ASSOCIATED WITH ______________________________________;
(list of relation names)

ATTRIBUTES ARE ______________________ (attribute name)   ______________________, (attribute value)

______________________   ______________________,

______________________   ______________________;

CLASSIFICATION ______________________________________;
(list of classification names
optionally followed by classification levels)

CONSISTS OF ______________________________________;
(list of group and element names,
optionally preceded by system-parameters)

CONTAINED IN ______________________________________;
(list of group, entity, input and output names)

DERIVED BY ______________________________________
(list of process names)

USING ______________________________________;
(list of input, entity, set, group or element names)

DERIVED BY ______________________________________;
(list of process names)

DESCRIPTION;

____

____

____;
(narrative description)

IDENTIFIES ______________________________________;
(list of entity names)

KEYWORDS ______________________________________;
(list of keywords)

URL GROUP DEFINITION FORM (Page 2)

------------------------ ----------- PAGE ___ OF ___
system name date

RESPONSIBLE-PROBLEM-DEFINER ------------------------------------;
(name of responsible problem definer)

SECURITY ---;
(list of applicable security names)

SEE-MEMO ---;
(list of memo names)

SOURCE ---;
(list of sources of information)

SUBSETTING-CRITERION FOR ---;
(list of set names)

SYNONYMS ---;
(list of synonyms)

TRACE-KEY --;
(list of trace-key names)

UPDATED BY ---
(list of process names)

USING --;
(list of input, set, entity, group or element names)

UPDATED BY ---;
(list of process names)

USED BY --
(list of process names)

TO DERIVE --;
(list of set, entity, group, element and output names)

USED BY --
(list of process names)

TO UPDATE --;
(list of set, entity, group and element names)

USED BY --;
(list of process names)

URL INPUT DEFINITION FORM

------------------------   ----------   PAGE ___ OF ___
system name   date

INPUT ------------------------------------;
(name of input)

ASSERT --;
(list of names followed by attribute-names
and attribute-values)

ATTRIBUTES ARE ----------------------   ----------------------,
(attribute name)   (attribute value)

----------------------   ----------------------,

----------------------   ----------------------;

CAUSES --;
(list of event names)

CLASSIFICATION --;
(list of classification names
optionally followed by classification levels)

CONSISTS OF --;
(list of group and element names,
optionally preceded by system-parameters)

CONTAINED IN ---;
(list of set names)

DESCRIPTION;

---;
(narrative description)

GENERATED BY ---;
(list of interface names)

HAPPENS ---
(system-parameter)

TIMES-PER --;
(interval name)

INTERRUPTS ---;
(list of process names)

KEYWORDS --;
(list of keywords)

URL INPUT DEFINITION FORM (Page 2)

______________________ ____________ PAGE ___ OF ___
system name date

MAKES ____ TRUE;
(list of condition names)

MAKES ____ FALSE;
(list of condition names)

PART OF ____;
(name of input)

RECEIVED BY ____;
(list of process names)

RESPONSIBLE PROBLEM-DEFINER ______________________________;
(name of responsible problem definer)

SECURITY ____;
(list of applicable security names)

SEE-MEMO ____;
(list of memo names)

SOURCE ____;
(list of sources of information)

SUBPARTS ARE ____;
(list of input names)

SYNONYMS ____;
(list of synonyms)

TERMINATES ____;
(list of process names)

TRACE-KEY ____;
(list of trace-key names)

TRIGGERS ____;
(list of process names)

USED BY ____
(list of process names)

TO DERIVE ____;
(list of set, entity, group, element, and output names)

USED BY ____
(list of process names)

TO UPDATE ____;
(list of set, entity, group, and element names)

USED BY ____;
(list of process names)

URL INTERFACE DEFINITION FORM

---------------------- ------------ PAGE ___ OF ___
system name date

INTERFACE ----------------------------------;
(name of interface)

ASSERT --;
(list of names followed by attribute-names
and attribute-values)

ATTRIBUTES ARE ---------------------- ----------------------,
(attribute name) (attribute value)

---------------------- ----------------------,

---------------------- ----------------------,

---------------------- ----------------------;

DESCRIPTION;

---;
(narrative description)

GENERATES --;
(list of input names)

KEYWORDS ---;
(list of keywords)

PART OF --;
(interface name)

URL INTERFACE DEFINITION FORM (Page 2)

________________________ ___________ PAGE ___ OF ___
system name date

RECEIVES ____;
(list of output names)

RESPONSIBLE FOR ____;
(list of set names)

RESPONSIBLE-PROBLEM-DEFINER ________________________________;
(name of responsible problem definer)

SECURITY ____;
(list of applicable security names)

SECURITY-ACCESS-RIGHT _______________________________________;
(list of classification names
optionally followed by
classification levels)

SEE-MEMO ____;
(list of memo names)

SOURCE ____;
(list of sources of information)

SUBPARTS ARE ____;
(list of interface names)

SYNONYMS ____;
(list of synonyms)

TRACE-KEY ____;
(list of trace-key names)

URL INTERVAL DEFINITION FORM

______________________ ___________ PAGE ___ OF ___
system name date

INTERVAL ______________________________;
(name of interval)

ASSERT ____;
(list of names followed by attribute-names
and attribute-values)

ATTRIBUTES ARE ____________________ ____________________,
(attribute name) (attribute value)

____________________ ____________________,

____________________ ____________________;

CONSISTS OF ____;
(list of interval names, optionally preceded by
system-parameters)

DESCRIPTION;

____

____

____

____;
(narrative description)

KEYWORDS ____;
(list of keywords)

RESPONSIBLE-PROBLEM-DEFINER _____________________________;
(name of responsible problem definer)

SECURITY ____;
(list of applicable security names)

SEE-MEMO ____;
(list of memo names)

SOURCE ____;
(list of sources of information)

SYNONYMS ____;
(list of synonyms)

TRACE-KEY ____;
(list of trace-key names)

URL MEMO DEFINITION FORM

```
-----------------------     -----------           PAGE ___ OF ___
      system name               date

           MEMO   -------------------------------------;
                              (memo name)

APPLIES TO  -----------------------------------------------------;
                              (list of section names)

ASSERT  ---------------------------------------------------------;
          (list of names followed by attribute-names
                         and attribute-values)

ATTRIBUTES ARE  ----------------------     ----------------------,
                  (attribute name)           (attribute value)

                ----------------------     ----------------------,

                ----------------------     ----------------------;

DESCRIPTION;

    -------------------------------------------------------------

    -------------------------------------------------------------

    -------------------------------------------------------------

    -------------------------------------------------------------;
                       (narrative description)

KEYWORDS  -------------------------------------------------------;
                              (list of keywords)

RESPONSIBLE-PROBLEM-DEFINER  ------------------------------------;
                             (name of responsible problem definer)

SECURITY  -------------------------------------------------------;
                 (list of applicable security names)

SOURCE  ---------------------------------------------------------;
                    (list of sources of information)

SYNONYMS  -------------------------------------------------------;
                           (list of synonyms)

TRACE-KEY  ------------------------------------------------------;
                 (list of trace-key names)
```

URL OUTPUT DEFINITION FORM

________________________ ____________ PAGE ___ OF ___
system name . date

OUTPUT ______________________________________;
(name of output)

ASSERT ____;
(list of names followed by attribute-names
and attribute-values)

ATTRIBUTES ARE ____________________ ____________________,
(attribute name) (attribute value)

____________________ ____________________,

____________________ ____________________;

CLASSIFICATION ______________________________________;
(list of classification names
optionally followed by classification levels)

CONSISTS OF ______________________________________;
(list of group and element names,
optionally preceded by system-parameters)

CONTAINED IN ______________________________________;
(list of set names)

DERIVED BY ______________________________________
(list of process names)

USING ______________________________________;
(list of input, set, entity, group and element names)

DERIVED BY ______________________________________;
(list of process names)

DESCRIPTION;

____

____

____;
(narrative description)

GENERATED BY ______________________________________;
(list of process names)

HAPPENS ______________________________________
(system-parameter)

TIMES-PER ______________________________________;
(interval name)

URL OUTPUT DEFINITION FORM (Page 2)

________________________ ____________ PAGE ___ OF ___

system name date

KEYWORDS ____;

(list of keywords)

PART OF ____;

(name of output)

RECEIVED BY ____;

(list of interface names)

RESPONSIBLE PROBLEM-DEFINER ______________________________;

(name of responsible problem definer)

SECURITY ____;

(list of applicable security names)

SEE-MEMO ____;

(list of memo names)

SOURCE ____;

(list of sources of information)

SUBPARTS ARE ____;

(list of output names)

SYNONYMS ____;

(list of synonyms)

TRACE-KEY ____;

(list of trace-key names)

URL PROBLEM-DEFINER DEFINITION FORM

____________________ ____________ PAGE ___ OF ___
system name date

PROBLEM-DEFINER ______________________;
(name of problem definer)

ASSERT ____;
(list of names followed by attribute-names
and attribute-values)

ATTRIBUTES ARE ____________________ ____________________,
(attribute name) (attribute value)

____________________ ____________________,

____________________ ____________________;

DESCRIPTION;

____

____

____;
(narrative description)

KEYWORDS ____;
(list of keywords)

MAILBOX ____;
(name of mailbox for problem definer)

RESPONSIBLE FOR ____;
(list of sections)

SECURITY IS ____;
(list of applicable security names)

SEE-MEMO ____;
(list of memo names)

SOURCE IS ____;
(list of sources of information)

SYNONYMS ____;
(list of synonyms)

TRACE-KEY ____;
(list of trace-key names)

URL PROCESS DEFINITION FORM

______________________ ___________ PAGE ___ OF ___
system name date

PROCESS ________________________________;
(name of process)

ASSERT ____;
(list of names followed by attribute-names
and attribute-values)

ATTRIBUTES ARE ____________________ ____________________,
(attribute name) (attribute value)

____________________ ____________________,

____________________ ____________________;

DERIVES ____
(list of element, group, entity, set and output names)

USING ____;
(list of element, group, entity, set and input names)

DERIVES ____;
(list of element, group, entity, set and output names)

DESCRIPTION;

____

____

____;
(narrative description)

GENERATES ____;
(list of output names)

HAPPENS ____________________ TIMES-PER ____________________;
(system-parameter) (interval name)

INCEPTION-CAUSES ____________________________________;
(list of event names)

INTERRUPTED BY ______________________________________;
(list of event, input, and process names)

INTERRUPTED WHEN ____________________________ BECOMES TRUE;
(name of condition)

INTERRUPTED WHEN ____________________________ BECOMES FALSE;
(name of condition)

INTERRUPTS ____;
(list of process names)

URL PROCESS DEFINITION FORM (Page 2)

________________________ ____________ PAGE ___ OF ___
system name date

KEYWORDS ____;
(list of keywords)

MAINTAINS ____;
(list of relation or subsetting-criteria names)

MAKES ____ TRUE;
(list of condition names)

MAKES ____ FALSE;
(list of condition names)

PART OF ____;
(process name)

PERFORMED BY _____________________________________;
(name of processor)

PROCEDURE;

____

____

____

____

____

____;
(comment entry: description of procedure)

RECEIVES ____;
(list of input names)

RESOURCE-USAGE ____________________ FOR ______________;
(system-parameter) (name of resource-usage-parameter)

RESPONSIBLE-PROBLEM-DEFINER _________________________;
(name of responsible problem definer)

URL PROCESS DEFINITION FORM (Page 3)

------------------------ ---------- PAGE ___ OF ___
system name date

SECURITY --;
(list of applicable security names)

SECURITY-ACCESS-RIGHT --;
(list of classification names
optionally followed by
classification levels)

SEE-MEMO --;
(list of memo names)

SOURCE --;
(list of sources of information)

SUBPARTS ARE --;
(list of process names)

SYNONYMS --;
(list of synonyms)

TERMINATED BY --;
(list of event, input, and process names)

TERMINATED WHEN ------------------------------- BECOMES TRUE;
(name of condition)

TERMINATED WHEN ------------------------------- BECOMES FALSE;
(name of condition)

TERMINATES ---;
(list process names)

TERMINATION-CAUSES ---;
(list of event names)

TRACE-KEY --;
(list of trace-key names)

TRIGGERED BY --;
(list of event, input, and process names)

TRIGGERED WHEN ------------------------------- BECOMES TRUE;
(name of condition)

TRIGGERED WHEN ------------------------------- BECOMES FALSE;
(name of condition)

TRIGGERS --;
(list of process names)

URL PROCESS DEFINITION FORM (Page 4)

______________________ ____________ PAGE ___ OF ___
system name date

UPDATES ____
(list of entity, set, group, and element names)

USING ____;
(list of input, set, entity, group, and element names)

UPDATES ____;
(list of entity, set, group, and element names)

USES ____
(list of set, group, element, input, and entity names)

TO DERIVE ____;
(list of set, entity, group, element,
and output names)

USES ____
(list of set, group, element, input, and entity names)

TO UPDATE ____;
(list of set, entity, group, and element names)

USES ____;
(list of set, group, element, input, and entity names)

UTILIZED BY ____;
(list of process names)

UTILIZES ____;
(list of process names)

URL PROCESSOR DEFINITION FORM

______________________ ___________ PAGE ___ OF ___
system name date

PROCESSOR ______________________________;
(name of processor)

ASSERT ____;
(list of names followed by attribute-names
and attribute-values)

ATTRIBUTES ARE ____________________ ____________________,
(attribute name) (attribute value)

____________________ ____________________,

____________________ ____________________;

CONSUMES ______________________________ AT RATE OF
(name of resource)

______________________ PER ____________________;
(system-parameter) (name of
resource-usage-parameter)

DESCRIPTION;

____

____

____

____

____;
(narrative description)

URL PROCESSOR DEFINITION FORM (Page 2)

________________________ __________ PAGE ___ OF ___
system name date

KEYWORDS ____;
(list of keywords)

PART OF ____;
(processor name)

PERFORMS ____;
(list of process names)

RESPONSIBLE-PROBLEM-DEFINER ______________________________;
(name of responsible problem definer)

SECURITY ____;
(list of applicable security names)

SECURITY-ACCESS-RIGHT ____________________________________;
(list of classification names
optionally followed by
classification levels)

SEE-MEMO ____;
(list of memo names)

SOURCE ____;
(list of sources of information)

SUBPARTS ARE ____;
(list of process names)

SYNONYMS ____;
(list of synonyms)

TRACE-KEY ____;
(list of trace-key names)

URL RELATION DEFINITION FORM

PAGE ___ OF ___

----------------------- -----------
system name date

RELATION --;
(name of relation)

ASSERT --;
(list of names followed by attribute-names
and attribute-values)

ASSOCIATED-DATA IS --;
(list of element and group names)

ATTRIBUTES ARE ---------------------- ----------------------,
(attribute name) (attribute value)

---------------------- ----------------------,

---------------------- ----------------------;

BETWEEN --
(name of entity)

AND --;
(name of entity)

CARDINALITY IS --;
(system-parameter)

CONNECTIVITY IS --
(system-parameter)

TO --;
(system-parameter)

DERIVATION;

--;
(derivation rules)

URL RELATION DEFINITION FORM (Page 2)

---------------------- system name ---------- date PAGE ___ OF ___

DESCRIPTION;

--;
(narrative description)

KEYWORDS --; (list of keywords)

MAINTAINED BY --; (list of process names)

RESPONSIBLE PROBLEM-DEFINER ----------------------------; (name of responsible problem definer)

SECURITY --; (list of applicable security names)

SEE-MEMO --; (list of memo names)

SOURCE --; (list of sources of information)

SYNONYMS --; (list of synonyms)

TRACE-KEY ---; (list of trace-key names)

URL RESOURCE-USAGE-PARAMETER DEFINITION FORM

PAGE ___ OF ___

______________________ (system name) __________ (date)

RESOURCE-USAGE-PARAMETER ______________________;
(name of resource-usage-parameter)

ASSERT ______________________________________;
(list of names followed by attribute-names and attribute-values)

ATTRIBUTES ARE ____________________ (attribute name) ____________________ (attribute value),

____________________ ____________________,

____________________ ____________________;

DESCRIPTION;

____

____

____;
(narrative description)

KEYWORDS ______________________________________;
(list of keywords)

RESOURCE-USAGE-PARAMETER-VALUE ______________________
(system-parameter)

FOR ______________________________________;
(name of process)

RESPONSIBLE-PROBLEM-DEFINER ______________________;
(name of responsible problem definer)

SECURITY ______________________________________;
(list of applicable security names)

SEE-MEMO ______________________________________;
(list of memo names)

SOURCE ______________________________________;
(list of sources of information)

SYNONYMS ______________________________________;
(list of synonyms)

TRACE-KEY ______________________________________;
(list of trace-key names)

URL SET DEFINITION FORM

```
-------------------------   ------------          PAGE ___ OF ___
      system name               date

         SET   ----------------------------------------;
                          (name of set)

ASSERT  --------------------------------------------------------;
          (list of names followed by attribute-names
                    and attribute-values)

ATTRIBUTES ARE  ------------------------   ------------------------,
                  (attribute name)            (attribute value)

                ------------------------   ------------------------,

                ------------------------   ------------------------;

CARDINALITY IS  --------------------------------------------------;
                              (system-parameter)

CLASSIFICATION  --------------------------------------------------;
                         (list of classification names
                  optionally followed by classification levels)

CONSISTS OF  ------------------------------------------------------;
                 (list of entity, input, and output names,
                  optionally preceded by system-parameters)

DERIVATION;

      ------------------------------------------------------------

      ------------------------------------------------------------;
                   (comment entry:  derivation rules)

DERIVED BY  -------------------------------------------------------
                        (list of process names)
    USING   -------------------------------------------------------;
         (list of input, set, entity, group and element names)

DERIVED BY  -------------------------------------------------------;
                        (list of process names)

DESCRIPTION;

      ------------------------------------------------------------

      ------------------------------------------------------------

      ------------------------------------------------------------;
                  (narrative description)
```

URL SET DEFINITION FORM (Page 2)

------------------------ ----------- PAGE --- OF ---
system name date

KEYWORDS ---;
(list of keywords)

RESPONSIBLE-INTERFACE ----------------------------------;
(list of interface names)

RESPONSIBLE-PROBLEM-DEFINER ----------------------------;
(name of responsible problem definer)

SECURITY ---;
(list of applicable security names)

SEE-MEMO ---;
(list of memo names)

SOURCE ---;
(list of sources of information)

SUBSET OF --;
(list of set names)

SUBSETS ARE --;
(list of set names)

SUBSETTING-CRITERIA ARE --------------------------------;
(list of subsetting-criterion, element,
and group names)

SYNONYMS ---;
(list of synonyms)

TRACE-KEY --;
(list of trace-key names)

URL SET DEFINITION FORM (Page 3)

------------------------ system name   ----------- date   PAGE ___ OF ___

UPDATED BY -- (list of process names)

USING --; (list of input, set, entity, group, and element names)

UPDATED BY ---; (list of process names)

USED BY --- (list of process names)

TO DERIVE ---; (list of set, entity, group, element, and output names)

USED BY --- (list of process names)

TO UPDATE ---; (list of set, entity, group, and element names)

USED BY --; (list of process names)

VOLATILITY-MEMBER;

---; (comment-entry: changeability of a member of the set)

VOLATILITY-SET;

---; (comment-entry: changeability of the set)

URL UNIT DEFINITION FORM

________________________ ____________ PAGE ___ OF ___
system name date

UNIT ______________________________________;
(name of unit)

ASSERT ____;
(list of names followed by attribute-names
and attribute-values)

ATTRIBUTES ARE ______________________ ______________________,
(attribute name) (attribute value)

______________________ ______________________,

______________________ ______________________;

DESCRIPTION;

____

____

____;
(narrative description)

KEYWORDS ____;
(list of keywords)

MEASURES ____;
(list of resource names)

RESPONSIBLE-PROBLEM-DEFINER ______________________________;
(name of responsible problem definer)

SECURITY ____;
(list of applicable security names)

SEE-MEMO ____;
(list of memo names)

SOURCE ____;
(list of sources of information)

SYNONYMS ____;
(list of synonyms)

TRACE-KEY ____;
(list of trace-key names)

URL CONTINUATION FORM

______________________ __________ PAGE ___ OF ___

system name date

____________________ __________________;

(section type) (name)

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____

INDEX

INDEX

INDEX

INDEX